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PEER RELATIONS IN THE UNGRADED PRIMARY:
AN EXAMINATION OF FRIENDSHIP AND ITS BENEFITS

A Thesis

Presented to

the Faculty of the Department of Psychology

Western Kentucky University

Bowling Green, Kentucky

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

By

Donna Siler Gregory

August 1999

PEER RELATIONS IN THE UNGRADED PRIMARY:
AN EXAMINATION OF FRIENDSHIP AND ITS BENEFITS

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ACKNOWLEDGMENTS

Completion of this project would not have been possible without support from several individuals. I would like to thank my mentor, Dr. Elizabeth Lemerise. She has not only used her knowledge of the field to guide my thinking and preparation of this thesis but also was unselfish with her time as she read many drafts of this work. Throughout the completion of this project, she could be counted on to provide helpful criticism, encouragement, and a genuine interest in and excitement about the content of this project. Completing this project under her guidance has not only resulted in a thesis to finish my degree but also a deeper knowledge and appreciation for the research process. I feel very fortunate to have had the opportunity to work with and learn from her as I completed this project.

I also would like to thank the members of my committee, Dr. Joseph Billota and Dr. Shula Ramsay. Their careful reading, helpful suggestions, and support were truly an asset to this project.

This project would not have been possible without the cooperation of the teachers, administrators, and students of the Warren County and Bowling Green City school districts, or without the help of graduate and undergraduate assistants who collected the sociometric and video data. Specifically, I would like to thank Jessica Allen for her work in coding and entering the friendship data.

Lastly, I would like to thank my husband, Robin, for his support during this

time. His encouragement and understanding were invaluable as I worked on this project.

Many thanks to all who contributed to this project.

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August 1999

83 pages

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Mixed-age peer contexts have been considered important in the peer relations literature, but there has been relatively little research on children's peer relations in these settings. Ungraded primary programs mandated by recent school reform efforts in Kentucky provide a unique opportunity to study peer relations in a mixed-age context. The present study examined patterns of reciprocated friendship in ungraded primary classrooms and their relation to peer- and teacher-rated social competence. Both level of overall peer acceptance and age relative to ungraded primary classmates influenced the number and pattern of reciprocated friendships. Children who had friends were seen as more socially competent by both their teachers and peers.

Chapter I

Introduction

“...how can there be a life worth living...unless it rest upon the mutual love of friends?” (Cicero, 44 B. C./1993, p. 74)

Friendship was the topic of discourse among philosophers such as Plato, Aristotle, and Cicero long before scientific investigation of the phenomenon had begun. They produced dialogues that attempted to understand the mutual attraction between friends. Issues at the forefront of these discussions involved the characteristics that drew friends together, as well as the value of having a friend. Their's was not a discussion of research and statistics, but rather of a phenomenon observed and experienced.

Telfer (1970), in her essay “Friendship”, considered the question why friendship is a good thing. She asserted (with debt to Aristotle) that friendship is good because it is life-enhancing, enriches our activities, and enlarges our knowledge. For these reasons, she concluded that the happy man needs a friend.

The value of friendship has been noticed beyond philosophical discussion. Piaget (1965) noted the value of friendship in the development of moral reasoning, as well as in the decrease of egocentrism. Because same-age peers interact on an equal basis, skills such as negotiation and compromise are

learned during interaction with peers. These skills are less likely to develop in the context of relationships where power and status are not equal. Piaget also argued that because children enjoy peer interactions and want them to continue, they come to value reciprocity and fairness in peer interactions. These values become more generally applied and play an important role in the child's moral reasoning.

Hartup (1996) speaks of the benefits of friendship as well. He asserts that children use their peers as cognitive and social resources in their everyday activities. Additionally, he believes that friends act as a buffer for the normal stresses that children experience, such as changing classrooms or starting a new activity. Similarly, Newcomb and Bagwell (1995) maintain that peers are important for social and emotional growth. Friendships are often the means by which children try out new social identities and learn more about themselves as they look into the "mirror" of their friend. The advantages of having a friend with whom to walk through childhood and adolescent experiences seem important.

Research and theory in this area, however, are not complete. Examination of the dynamics of mixed-age friendships as well as the benefits of friendship for those children less accepted in their peer groups are a few of the areas that need further exploration. The purpose of this study was to look at friendships within the ungraded primary and attempt to unravel some of the mysteries of peer relations in this context.

Characteristics of Group Acceptance

Although they are two seemingly similar constructs, it is important to make

a conceptual distinction between popularity and friendship. Bukowski and Hoza (1989) make this distinction by defining popularity as whether one is liked or disliked by the group as a whole, whereas friendship is seen as the “experience of having a close, mutual, dyadic relation” (p. 19).

A child’s popularity can be operationalized in two different ways. One way is to examine classmates’ ratings on a 1 (don’t like very much) to 5 (like the most) Likert-type scale. The ratings the child receives are averaged and standardized within class, and high-, average-, and low-acceptance are determined based on the standardized ratings (Asher & Hymel, 1981). Another method examines positive and negative nominations. An example of a positive nomination involves a child nominating up to three of his/her classmates as people he/she likes the most. Negative nominations involve children naming the three children liked the least. Because some school administrators are uncomfortable with the traditional negative nomination question (“List three children you like the least”), the number of like least ratings (“1” ratings on the 1 to 5 Likert scale) can be substituted for the number of negative nominations (Asher & Dodge, 1986). Children of popular status receive many positive nominations and very few negative nominations. Children who are classified as rejected receive very few positive nominations and many negative nominations. The classification “controversial” is for children who receive both positive and negative nominations, indicating that some classmates like them, and some classmates do not like them (Coie, Dodge, & Coppotelli, 1982). For clarity, we will refer to a child’s popularity determined by the rating scale as peer

acceptance, whereas popularity determined by positive and negative nominations will be referred to as social status.

Although the child's standing within the group influences the likelihood that one would have a friend, it does not guarantee or preclude friendship. Parker and Asher (1993) found that 6% of highly accepted children did not have a friend, whereas 45% of low-accepted children had a friend. The significance of friendship for children differing in popularity has been examined. Investigating the relationship between loneliness and friendship, Parker and Asher reported that children without a friend were more lonely than children with a friend, regardless of how well accepted they were. Friends and popularity contribute to children's development in different, albeit overlapping, ways. Whereas popularity affords the self-esteem enhancement of being liked by the group, friendship, because of its close relationship, helps children learn skills such as conflict management, as well as role expectations and obligations (Parker & Asher, 1993). The distinction between popularity and friendship within the context of social competence is an important one.

Most research in the peer relations area has focused on popularity rather than friendship. The benefits and/or costs of high or low peer acceptance or social status have been examined by several authors. Accepted children are often more socially competent than their lower accepted counterparts. Bichard, Alden, Walker, and McMahon (1988) examined socially accepted, rejected, and neglected children's conceptions of interpersonal relations. They found that accepted children not only give and receive more positive reinforcement but also

show more leadership skills and are better communicators than other children. Likewise, Mendelson, Aboud, and Lanthier (1994) found that intelligence, attractiveness and high social skills are seen as characteristics of high acceptance not only in middle childhood but also in younger, kindergarten age children. The social interactions of low-accepted children are characteristically negative (Ladd, 1983), moreover these children also spend less time in prosocial interaction and often relate with younger and/or unpopular children (Ladd, 1988). From these data we see that acceptance and social competence are related, although it is not clear whether competence precedes acceptance, or vice versa.

When considering the friendships of high- versus low-accepted children, highly accepted children have more friends, and those friendships are of better quality than those of low-accepted children (Parker & Asher, 1993). The friendships of accepted children also prove to be more stable over time than the friendships of low-accepted children (Howes, 1990). Low-accepted children not only suffer from poor social skills and deteriorated friendships but also are likely to have problematic academic profiles (Wentzel & Asher, 1995). Additionally, the negative aspects of low acceptance do not generally end with leaving a certain group, but rather persist and are likely to be associated with adjustment problems later in life (Coie & Dodge, 1983; Parker & Asher, 1987).

Some theorists have argued that the behavioral problems seen in less well accepted children result from the way they process information about social situations. Crick and Dodge (1994) propose a model of social information processing which attempts to describe how children process social cues and

arrive at decisions concerning social situations or problems. The steps of this model are a reformulation of an earlier model that was criticized for its fixed, sequential structure. In this reformulation, the model has a structure that suggests that each step is not merely a function of the previous step, but rather contingent upon numerous factors. The six steps included in the reformulated model of social information processing are as follows: 1) encoding of internal and external cues, 2) interpretation and mental representation of the cues, 3) clarification or selection of a goal (child's desired outcome for a situation), 4) response access or construction, 5) response decision, and 6) behavioral enactment.

Consider this example. Betty and Jane are playing a game. Jane reaches over the game board to spin, and her arm hits Betty's game pieces and they fall. The model proposed by Crick and Dodge would be applied to this situation by first examining Betty's understanding of what actually happened (step 1). Did Betty see that Jane was reaching for the spinner? Does Betty notice the upset look on Jane's face after the pieces fall? Being able to pick up on the verbal and nonverbal cues within a social situation is very important. Next, how does Betty interpret the situation (step 2)? Does she believe that Jane knocked the pieces over on purpose, or does she think it was accidental? Following this interpretation step, Betty must make a decision about the outcome of the situation (step 3). Does she want to remain friends with Jane and continue the game, or would Betty prefer to put the game up and find someone else to play with? After deciding upon a desired outcome, Betty must decide

among different response options (step 4). If she desires to remain friends with Jane, she could either pick the pieces back up without saying anything, or she could tell Jane to be more careful next time. The last two steps (5 and 6) go hand in hand. Once Betty has examined all of the options, she decides on a response, and carries it out. Betty decides the best thing to do in this situation is to just pick the pieces up without saying anything, and so she does just that, and the game continues.

Research shows that children who are not as competent at processing social information may suffer socially because the way they progress through these stages is inadequate. Chandler (1973; cited in Dodge & Feldman, 1990) found a positive relationship between social perspective taking skills and popularity. Similarly, Dodge (1984; cited in Dodge & Feldman, 1990) used video-taped vignettes to examine children's abilities to accurately understand the social intentions of another. He found a positive relationship between the accuracy of intention judgments and sociometric status.

Research shows that the attributions children make about ambiguous situations are related to popularity. Dodge (1980; cited in Dodge & Feldman, 1990) found that unpopular children have a bias toward hostile attributions. For example, an ambiguous provocation in which a child spills water on another's paper will be interpreted by an unpopular child as the child spilled the water on purpose. In addition, the responses low status children make in these situations are more likely to be aggressive, inept, or vague.

An area that has not been examined as much is the relationship between

having a friend and social information processing skills. Does having and maintaining a friendship with another child encourage social information processing growth for low status children? Past research has shown that friends play an important role in children's social cognitive development. Brendgen, Brown, Rondeau, and Vitaro (1999) examined the effects of friends' characteristics on children's interpretation of social cues and generation of responses. Specifically, they looked at whether children's friends were prosocial or aggressive and how that related to children's social information processing. They found that the friend's aggressiveness was positively related to aggressive solutions to social problems. Prosociality, however, was related to pacifistic/prosocial responses only if the child making the responses also was low in aggression. The results of this research show that friends seem to play a role in social information processing, but much more needs to be known. Because low-accepted children usually act and think in socially maladaptive ways, knowing whether or not a friend influences them for the better is an important theoretical question.

It is important to realize that although peer rejection is related to many social problems, there are fewer differences between children who are average accepted and popular. In examining social competence, it is essential to understand the unique contributions of popularity and friendship. Is it necessary to be highly accepted by the group, or does having a friend make up for not being as well liked? Research in the peer relations area has yet to completely address the relationship of group acceptance and friendship to social

competence.

Theories of Friendship

Research regarding peer acceptance has been plentiful. However, not as much research has been done on the development and benefits of friendship. Because of this deficiency, information about friendship development and the benefits of having friends comes mainly from theories and the scant empirical research that has been performed to test them.

One of the first friendship theorists in psychology was Sullivan (1953). Sullivan argued that certain interpersonal needs arise at different times during development, and that interpersonal relationships are sought to meet these specific needs. He proposed that young children have a need for overall group acceptance and meet this need by participating in the general peer group. However, Sullivan states that as middle childhood is reached, there is a shift from wanting overall acceptance to desiring intimacy with a particular same-sex friend. Sullivan viewed this middle childhood friendship as a relationship characterized by sensitivity to needs and mutual satisfaction. It was within this relationship, Sullivan believed, that the stage was set for learning interpersonal competencies and receiving validation of self-worth.

To examine Sullivan's idea of support in children's relationships, Berndt and Perry (1986) looked at the supportive features of second, fourth, sixth, and eighth grade students' friendships. Using an interview that examined qualities such as play/association, prosocial behavior, intimacy, loyalty, and attachment/self-esteem, Berndt and Perry discovered that fourth graders viewed

nonfriends more negatively than did older children. It also has been reported that friendships at this age show more intimacy and reciprocity than those of younger children (Berndt, Hawkins, & Hoyle, 1986; Ladd, 1988), and that friendships within the overall peer group are based on similarities between the friends (Erwin, 1985; Poulin, Cillessen, Hubbard, Coie, Dodge, & Schwartz, 1997). These data support Sullivan's idea that middle childhood is a time to concentrate on a "best friend" and to see acquaintances as not being as good as this best friend.

In a study concerning the development of companionship and intimacy, Buhrmester and Furman (1987) examined second, fifth, and eighth grader's ratings of the importance of intimacy and companionship in their friendships. Although companionship was important across all three grade levels, as children grew older, they preferred their friends over parents and other family members for support and companionship. Although this research does not support Sullivan's ideas regarding the developmental changes in intimacy, the authors suggest that this result could be due to the type of measure used, or to the failure of their measure to detect the different ways intimacy is expressed at different ages. Nevertheless, the tendency to meet interpersonal needs via friends during middle childhood is strong support of Sullivan's views.

Sullivan's basic ideas of the developmental changes in friendship have been embraced by researchers. Buhrmester and Furman (1986) built on Sullivan's ideas and further developed the idea that social competencies are learned through friendship. Buhrmester and Furman assert that social

competence develops as other skills do; they are learned and used as the need arises. Parent-child relationships offer the opportunity to learn certain social skills, and the peer relationship (due to its egalitarian nature) affords the opportunity to learn different skills. Thus, children experience growth in social competencies as they take on new types of interactions. Skills such as empathy, perspective-taking, and altruistic concern are developed within friendships and are important characteristics of friendships. Other skills such as cooperation, competition, and compromise are developed and used in friendships, but also are important for learning to successfully participate in the group as a whole. The Neo-Sullivanian approach of Buhrmester and Furman fits nicely with the idea that friendships should be considered as mutual relationships. They assert that social skills develop within a friendship that involves both children working to make the relationship succeed and grow. The same skills could not be achieved from stagnant or one-sided relations. A mutual, dynamic relationship is necessary for the development of social competence through friendship as conceptualized by the Neo-Sullivanian view.

Other theorists want to do more than just describe what happens in friendship; they desire to examine social development as facilitated by friendship at different ages. Parker and Gottman (1989) put forth a theory that is different from previous attempts to explain what happens in friendship. The theories of both Sullivan (1953) and Buhrmester and Furman (1986) originated from hypotheses derived from observations and speculations about adult friendships. This deductive approach misses some of the important developmental changes

that children experience, as well as how those changes prompt the types of relationships sought and the skills that will be important to master at a certain age. Parker and Gottman argue that it is important to take these changes into consideration when theorizing about the friendships of children. Their theory is different in that they began with observational data of children and worked forward to develop their theory of the characteristics and benefits of friendship for preschool and school-age children.

For children who are roughly three to seven years of age, Parker and Gottman believe that the main purpose of peers is for play and entertainment. The amount of interactive activity between the two friends determines the level of pleasure the interaction will produce. Interactive activity can range from simple conversation during side-by-side, but independent, play to participating in a mutually agreed upon fantasy in which both partners take on a role that facilitates the fantasy. During these interactions, conversation between the two becomes important, focusing on further coordinating activity, and resolving inevitable conflicts. Along with these skills, the ability to control excitement to a manageable level becomes important. For the young child, interaction with peers facilitates the development of coordinated action, conflict resolution, and personal regulation; all of these skills will be necessary to maintain peer relations as the child grows older.

The skills learned by participating in friendship in early childhood are the building blocks for making the most of peer relations during middle childhood. Parker and Gottman (1989) assert that between the ages of eight and twelve

years, acceptance by the peer group as a whole becomes the main focus.

During this stage, groups tend to separate by gender as well as by acceptance level. The desire for and achievement of acceptance at this age also results in academic benefits. Research shows that children with friends have better attitudes about school, and that making new friends within the classroom results in gains in school performance. (Ladd, 1990). Likewise, children with friends have higher achievement scores than children without friends (Diehl, Lemerise, Caverly, Ramsay, & Roberts, 1998).

During middle childhood, social skills and norms are passed on through peer groups via negative evaluation and gossip (Parker & Gottman, 1989). By evaluating those outside the peer group on particular factors, friends help each other know what type of behavior is acceptable and/or expected within the group in areas such as conflict resolution and group loyalty. In essence, these relationships serve as the training ground for future relationships; children take on different roles and attitudes within the group, and then can evaluate the effectiveness of their actions for maintaining successful relationships (Hartup, 1996).

Measurement Issues

As a result of the theoretical separation of acceptance and friendship, measurement issues have been important. Previous methods for assessing popularity and friendship involved using positive nominations from sociometrics; children were asked to name the three children they like the most. The popularity of the child was then determined by the number of nominations they

received from their peers. Using this method, both the child's overall standing within the group and their friendships were assessed using the same measure. This method, however, is not capable of clearly distinguishing between acceptance and friendship, and actually further complicates the issue (Asher, Parker, & Walker, 1996).

In an attempt to unravel the assessment of friendship and acceptance, later methods suggested that acceptance should be determined by an average score on a rating scale that measures how much one likes to play with each child in the peer group. Friendships, in turn, would be determined by positive nominations (e.g., "List three children you like the most"; Asher, et al., 1996).

Parker and Asher (1993) determined that average ratings were acceptable to assess acceptance, but reciprocated positive nominations should be necessary to determine friendship. They assert that based on the operational definition of friendship being a mutual and dyadic relationship, reciprocated nominations are necessary to clearly capture the friendship construct. The advantage of using rating scales to assess overall peer acceptance is that researchers can now look more clearly at the independent effects of acceptance and friendship as well as their joint contribution to the social development of children.

Conceptual and assessment distinctions are necessary because research shows that both friendship and acceptance contribute uniquely to a child's social experience. For example, although the number of friendships generally increases as acceptance increases, many low-accepted children have friends

(Parker & Asher, 1993). Unique contributions of group acceptance and friendship can also be seen in areas of school achievement (Diehl, et al., 1998) and in feelings of loneliness (Parker & Asher, 1993).

Mixed-Age Relationships

The majority of the research in peer relations has focused on same-age peer contexts. Less is known about the characteristics and specific benefits of mixed-age interactions. Hartup (1983) asserts that although same-age interactions are beneficial, the unbalanced relationship that occurs between children of different ages also is advantageous due to the numerous opportunities the older child will have to act as a role model for behavior, as well as the younger child's chance to learn from his older friend.

The dynamics of these friendships have been examined infrequently since most research is performed in schools where children spend most of their time in same-age groupings. Ladd (1983) examined mixed-age playground friendships of children in same-age classes. He found that rejected children's friendships were generally with younger and less popular children, and that the interactions they had were generally negative. Popular children, however, were found to play with older and more well liked peers. These findings imply that a child's social status can influence the types of friends with whom he interacts. This finding is significant because the interactions of rejected children with younger, less popular children may not afford the same opportunities to learn socially competent behaviors that interactions with more popular or older children might provide. Popular children, however, by interacting with older, well liked children

have more opportunities to learn socially appropriate behaviors.

Mixed-age interactions also may be influenced by contextual factors. Allen (1989) studied students at a middle school that was comprised of three separate sections, one of which was mixed-age, and found that more mixed-age friendships were reported in the mixed-age setting than in the same-age setting. Mixed-age friendships in the mixed-age setting were associated with lower general competence for both sixth and eighth graders. However, mixed-age friendships that occurred in the same-age setting were not related to these variables. Again, this research shows that mixed-age contexts offer opportunities for friendship for less competent and low-accepted children. However, it is not known if these friendships buffer the effects of low acceptance.

Lemerise (1997) examined how age relative to classmates (relative age) influences peer relations in mixed-age preschool and primary classrooms. Relative age was determined by calculating the children's ages (years, months, days) and standardizing them within class to yield age relative to classmates. These standardized values were used to define three groups: a) "young": relative age z -scores ≤ -0.5 ; b) "intermediate": relative age z -scores > -0.5 and $< +0.5$; and c) "old" relative age z -scores $\geq +0.5$. Lemerise found that children who were relatively younger than their classmates were less accepted overall than both children intermediate in age and children who were relatively older than their classmates. This pattern held across different ways of measuring group acceptance (mean liking ratings, nomination-based social status measures, and nominations for "gets along with everyone"). Relatively younger children were

more often classified as rejected and less often classified as controversial and popular than were intermediate age and relatively old children. Thus, in terms of group-based acceptance, this research suggests that mixed-age settings are beneficial for children who are older, while children who are relatively younger than their classmates seem to be at a disadvantage.

The effects of relatively younger children's lower peer group acceptance may depend on whether these children receive adequate acceptance from their same-age classmates (Lemerise, 1997) and/or whether they are able to form friendships (Parker & Asher, 1993). Using children from mixed-age (ungraded primary) classes, Caverly (1997) examined children's friendship patterns. She found that relatively younger children had fewer reciprocated friendships and were more likely to have no friends than relatively older children. Relatively older children also had more friendships with children who were also relatively old. Additionally, Caverly found that children who had at least one friend had more positive attitudes toward math and higher achievement scores than did children with no friends. In this study, although younger children were less likely to have friends than their relatively older classmates, having a friend was to their benefit.

Similarly, Diehl, et. al. (1998) found peer acceptance and friendship status (having a friend or not) each provided unique prediction of achievement scores in mixed-age classes. With the effects of race and gender controlled, children with one or more friends had higher achievement scores than did children with no friends. Likewise, ungraded primary children with at least one friend and popular children had the most favorable school adjustment.

From these studies it is evident that in the mixed-age setting, relatively younger children had fewer friends than their relatively older classmates, but having at least one friend had a positive effect on attitudes toward school and school achievement. However, the social benefits of having at least one friend in the mixed-age setting have yet to be examined. For example, does having an older, more socially competent friend help a relatively younger child learn more advanced social behavior? Perhaps friendships of relatively younger children buffer the stressful effects of being less accepted by the group as a whole. It also is possible that having younger children within the classroom gives less accepted, older children opportunities to participate in friendship, thus buffering their low acceptance as well. These are questions that have not been addressed by the research to this point. Yet, with mandated mixed-age classrooms in states such as Kentucky, understanding the dynamics of the mixed-age setting is imperative.

The Present Study

The purpose of this research was to examine the relation between friendship status and several indices of competence. Because low-accepted children often interact with younger, less socially skilled classmates (Ladd, 1983), they may miss opportunities to learn socially competent behaviors and thus fall behind their more accepted classmates. Measures of social and emotional information processing were used to examine the differences between children with at least one friend and those with no friends. Additionally, teacher-rated social and academic competence and peer-rated social competence were

examined. Based on the benefits of having a friend for school attitudes and adjustment, it was anticipated that friended children would show higher levels of competence than friendless children.

Although having a friend is seen as advantageous, it is important to consider the qualities of the individuals within the friendship. Parker and Asher (1993) found that friendship quality varied between low-, average-, and high-accepted children in the areas of validation and caring, help and guidance, conflict resolution, intimate exchange, and conflict and betrayal. Hartup (1996) asserts that the type of friend a child has may be important in determining the social benefits that will be gained as a result of that friendship. He argues that relationships between socially skilled individuals appear to be developmentally advantageous, but having a coercive and conflict-ridden friendship actually is a disadvantage. Not much is known, however, about the “tutoring” effects friendship could have if the friendship were between a low-accepted child and an average- or high-accepted child. This research also examined the contributions of friendship to low-accepted children’s social competence to determine whether socially successful peers facilitate low-accepted children’s adjustment in the school and peer contexts.

Hypothesis 1. Peer acceptance patterns of friendship were examined in ungraded primary classes. Based on Caverly (1997) and Parker and Asher (1993), it was hypothesized that highly accepted children would have more friends than low-accepted children. Additionally, it was hypothesized that the friends of high-accepted children would more likely be highly accepted than

average- or low-accepted, as well as relatively older.

Relative age patterns of friendship in the mixed-age primary were examined. Some younger children were expected to have friends. Parker and Asher (1993) report that high status within the group does not always mean one will have friends, and that having low group acceptance does not preclude the formation of friendships. Thus, although expected to have fewer friends than children who were intermediate in age and relatively older than the others in their class, relatively younger children were nonetheless expected to have friends despite being less accepted than intermediate or relatively old children.

Hypothesis 2. The benefits of having a friend versus not having a friend were examined. It was expected that children with at least one friend (regardless of acceptance level) would be rated by teachers and peers as having fewer problems and more competencies than children without friends.

Hypothesis 3. It was hypothesized that low-accepted children with average- or high-accepted friends would be more socially competent as measured by teacher ratings than low-accepted children with low-accepted friends and friendless low-accepted children.

Hypothesis 4. It was hypothesized that social information processing skills (i.e., encoding of social cues, being accurate in distinguishing the emotion of the provocateur, attributing nonhostile intentions, and giving socially appropriate responses to the provocation) would be uniquely predicted by friendship status (having a friend or not) and peer acceptance level.

Chapter II

Method

Participants

Participants were 710 children (369 boys; 341 girls) from 41 ungraded primary classes in 5 elementary schools. Ungraded primary classes were combinations of two grade levels (1-2, 2-3, 3-4). Three hundred sixty-seven (52%) were in a 1-2 mix, 159 (22%) were in a 2-3 mix, and 184 (26%) were in a 3-4 mix. Participation in peer assessments averaged 83% (range = 68% - 96%). Permission to conduct this research was granted by Western Kentucky University's Human Subjects Review Board, and the participating school boards. A meeting with the principal and teachers of each participating school was held to explain the research. Parental permission for the child's participation was indicated by signing and returning the permission letter. Also, since peer relations were studied, the child had to be in the class for eight weeks before data were collected.

Materials and Procedures

Peer Assessments of Behavior

Both rating and nomination sociometric assessments were administered to children who had been in the class at least eight weeks. Materials and procedures varied depending on the grade level of the class. Classes

including first graders were interviewed individually, and classes including second and higher grades were interviewed as groups in their own classroom (see Lemerise, 1997).

Individual interviews with the younger children began by explaining the need for confidentiality in the task. Next, children were trained on a 5-point Likert scale ranging from 1 "not at all" to 5 "like the very best" with points represented by sad, neutral, and happy faces. This scale was used for the ratings. The child was instructed on the meaning of each point. The interviewer made sure that the child understood the scale by having him/her rate liked and disliked foods on the scale, and showing the interviewer where his/her best friend and someone he/she does not like much would be on the scale. The children were then asked to rate how much they liked to work and play with their classmates. Although only children with parental permission were interviewed, all classmates were rated. Classmates' first names and last initials were printed in block letters on a 1" x 4" card and presented one at a time to the child.

After ratings were completed, all the name cards were spread out on the table, and children were asked to look them over and to nominate no more than three classmates for four nomination questions. Children were first asked to nominate up to three classmates with whom they liked to play and work with best of all. The following questions consisted of fighting ("who starts fights, says mean things, or hits other people?"), shyness ("who is shy and doesn't talk or play with others much?"), and social competence ("who is easiest to get along with or easy going?"). At the end of the interview children were asked what they wanted

to be when they grew up to distract them from the task. Once again, the need for confidentiality was stressed.

Older children in classroom combinations of second and third grades and third and fourth grades were interviewed as a group. Children without parental permission were given a packet of activity sheets to complete during the group interview. To prevent children from seeing the ratings or nominations of other classmates, the children were asked to move their desks apart, and to build walls around their papers with books or folders or to use cover sheets. A single interviewer led the group and discussed the need for confidentiality, demonstrated use of the 5-point rating scale, and explained rating and nomination procedures. Two or three trained lab assistants were present during the interview to assist children with questions, to prevent talking, and to make sure the children were completing the task correctly. For the rating procedure, each child was given a class roster with identification numbers to the left of each name, and a 5-point Likert scale to the right. The experimenter instructed the students to circle the number on the Likert scale that indicated how much he/she liked to work and play with each classmate.

After ratings were completed, children were asked to nominate up to three classmates for the same behaviors as in the individual interview (i.e., like to play and work with best, fight, shy, gets along). However, instead of using names, the children were instructed to use the identification number to the left of the name of the child they wished to nominate to ensure confidentiality. As in the individual interview, children were asked what they wanted to be when they grew up as a

distraction. Lastly, the need for confidentiality about the interview was discussed again.

Peer Relations Variables

The mean acceptance rating was calculated from the ratings each child received. These mean ratings were then standardized within class using z-scores to provide an overall measure of peer acceptance relative to classmates. Children with peer acceptance scores less than or equal to -1 were classified as low-accepted; children with peer acceptance scores greater than -1 and less than +1 were classified as average-accepted; and children with peer acceptance scores greater than or equal to +1 were considered high-accepted (Parker & Asher, 1993). Behavior nominations were tallied for each child and standardized within class to yield measures of aggressiveness, shyness, and socially competent behavior relative to classmates.

Friendship Variables

Reciprocated friendships were determined using the program Sociometricks developed by Parker and Seal (1994). Each child's "like best" nominations were entered into the computer via the student identification number for each child nominated. The program then printed a list of reciprocated nominations. The following variables were tallied: a) the total number of friends; b) number each of high-, average-, and low-accepted friends; c) number each of relatively young, intermediate, and relatively old friends, and d) the number of same grade friends were recorded. Additionally, a new variable was created to indicate whether or not the child had at least one friend.

Teacher Assessment of Behavior

Teachers were asked to complete the Teacher-Child Rating Scale (T-CRS) (Hightower, et al., 1986) for each child with parental permission; teachers were paid an honorarium for their help. The T-CRS is divided into two sections. The first section identifies problem behaviors such as acting out, being shy and anxious, and having learning difficulties. A high score on the first section was indicative of more problematic behaviors. The second section is designed to highlight social competencies such as being friendly, keeping on task, and defending one's own views. Higher scores on the second section indicated social competence.

Reliability of the scales that comprise the T-CRS, using Cronbach's alpha, ranged from .85 to .95 (median = .91). Ten and 20-week test-retest coefficients ranged from .61 to .91 (median = .83). Data on the scale's validity came from two sources. First, the scale's ability to differentiate between groups that have known differences in adjustment were examined. The T-CRS consistently discriminated between children with good and poor adjustment, likening it to other scales that had been designed for that purpose. Secondly, convergent and divergent validity with other measures of adjustment were examined. Data show that the scales of the T-CRS generally correlate significantly with similar measures of child adjustment (Hightower, et al., 1986).

Assessment of Social Information Processing

All children were interviewed individually. Seven video-taped ambiguous provocation vignettes were presented to each child (1 practice story, 6 stimulus

stories). Each story presented two children involved in a social interaction in which one peer (the provocateur) committed a behavior that resulted in a negative outcome for the other child (e.g., smashes a play dough creation or spills water on another child's painting). The provocateur's intention in each of the vignettes was ambiguous. The provocateur's affective display (angry, happy, sad) was varied across stories resulting in two stories for each emotion. Affective cues were counterbalanced forming three versions of the stimuli. Children were randomly assigned to version. Additionally, children were randomly assigned to either an "emotion" condition in which the child was directly asked about the provocateur's emotion, or a "no emotion" condition in which the child was not directly asked about the provocateur's emotion.

Children watched a practice story in the beginning of the interview to familiarize them with the interview. The interviewer explained to the child that there were two children in the stories, and that they were to pretend to be the child in the red numbered shirt (the victim). The child was asked to pretend that what was happening in the story was really happening to him or her.

Following each story, the child was asked questions that measure various levels of social information processing. Encoding of social cues was assessed by asking the child "what happened in that story?". Spontaneous attribution of intention or identification of the provocateur's emotion also was coded for this response. In the emotion condition, if the child did not spontaneously identify the provocateur's emotion, the child was asked "how was that other kid (the provocateur) feeling in that story?" Intention attributions were assessed by

asking the child "what was that other kid (the provocateur) trying to do when (the provocation) happened?". Lastly, the child's response to the provocation was examined by asking the child "if you were the kid in the red numbered shirt, what would you do if that happened to you?".

The encoding question was scored for accuracy with lower scores indicating higher accuracy. Lower scores on emotion accuracy were indicative of greater accuracy, and discrete emotions (happy, sad, angry) were coded as 1, 2, or 3, respectively. Intention attributions were coded such that higher scores indicated more hostile attributions. For example, a response such as "he took the ball to make me mad" was coded as hostile, "1," whereas a response such as "he caught the ball because he wanted to play with me" was coded as benign, "-1." Responses to the provocations were coded as verbally aggressive (1), physically aggressive (2), passive (3), avoidant (4), problem-directed problem solving (5), peer-directed problem solving (6), authority figure punishment (7), uncodable responses (8), and authority figure fix the problem (9).

Responses also were coded for hostility/friendliness and passivity/assertiveness (Murphy & Eisenberg, 1997). On the hostility/friendliness scale, low scores indicated behaviors that would be highly likely to result in a negative outcome for the peer, and included such things as physical aggression, threats, and telling the teacher. High scores on this scale indicated behaviors that were highly likely to result in a prosocial outcome for the peer, and included behaviors such as asking the peer to start the game over, joint clean-up/reparation of the provocation, or taking turns. On the passivity/assertiveness scale, low scores

were indicative of passive, yielding behaviors such as “I’d let him play with it” or leaving the situation. High scores on this scale indicated responses that were active and dominant and involved asserting one’s rights, such as “you need to clean that up” or “give me back my ball.”

Coding of children's answers was done by trained lab personnel. Inter-rater reliability was assessed using Cohen's Kappa (Cohen, 1960). Inter-rater reliability for each of the questions was as follows: encoding accuracy .89; emotion accuracy .94; discrete emotion .96; intention attribution .96; response .91; friendliness/hostility of response .83; assertiveness/passivity of response .85.

Age Relative to Peers

Each child's birthday was secured from either the school or the parent via the permission form. Exact age in years, months, and days was calculated from the date on which the child's class was interviewed. The exact age for each child was standardized within class using z-scores. Children with standardized ages less than or equal to -0.5 were classified as relatively young, children with standardized ages greater than -0.5 and less than +0.5 were classified as intermediate in relative age, and children with standardized ages greater than or equal to +0.5 were classified as relatively old (Lemerise, 1997).

Chapter III

Results

Descriptive Information

Out of the entire sample ($N = 710$), 474 children had at least one reciprocated friendship. Children could have from one to three friendships. Two hundred sixty children had one reciprocated friendship, 154 children had two reciprocated friendships, and 60 children had three reciprocated friendships. Chi-square analyses showed no race or gender differences in the likelihood of having a friend. Table 1 is a summary of peer acceptance level and relative age friendship patterns. Although 63% of low-accepted children were friendless in the sample, low-acceptance did not preclude friendship; there were 62 reciprocated friendships among low-accepted children, and not all high-accepted children had a friend.

Effects of Relative Age and Peer Acceptance on Number of Friends

Based on Caverly (1997) and Parker and Asher (1993), it was hypothesized that highly accepted children would have more friends than low-accepted children. It was hypothesized that relatively younger children, although expected to have fewer friends than intermediate age and relatively older children, were nonetheless expected to have friends despite being less

accepted than intermediate or relatively old children. To test this hypothesis a 3 (peer acceptance level; low, average, high) x 3 (relative age; young, intermediate, old) x 2 (gender) ANOVA with the number of reciprocated friendships as the dependent variable was performed. There was a main effect of relative age, $F(2, 692) = 8.44$, $p < .01$, and peer acceptance level, $F(2, 692) = 47.60$, $p < .01$. The main effect of peer acceptance level was modified by an interaction of peer acceptance level and gender, $F(4, 692) = 3.91$, $p < .03$. Simple effects and Tukey's HSD analyses were then used to examine group differences.

Figure 1 shows the relative age effect; relatively younger children had significantly fewer reciprocated friendships than relatively old children ($p < .01$). No difference was found between intermediate age and relatively old children for number of reciprocated friendships.

Simple effects analyses showed the effect of peer acceptance level on number of reciprocated friendships for boys, $F(2, 367) = 30.09$, $p < .01$, and girls, $F(2, 331) = 23.49$, $p < .01$. Tukey's HSD analysis was used to examine mean differences. Low-, average-, and high-accepted boys all significantly differed in the number of reciprocated friendships. Low-accepted boys had the fewest reciprocated friendships, and high-accepted boys had the most (all at $p < .01$). Girls who were low- and average-accepted had fewer friendships than those who were high-accepted; no significant differences were found between low- and average-accepted girls for number of friendships (all at $p < .01$). Within each acceptance level group, there were no gender differences for number of

reciprocated friendships (see Figure 2).

Patterns of Friendship: Peer Acceptance and Relative Age

It was hypothesized that the friends of high-accepted children would be more likely to also be highly accepted than the friends of average- or low-accepted children, as well as relatively older. To test this hypothesis a 3 (peer acceptance level) x 3 (relative age) MANCOVA was performed with gender as a covariate. Number of high-accepted friends, number of average-accepted friends, and number of low-accepted friends were the dependent measures.

There was a significant multivariate effect of peer acceptance level, $F(6, 1396) = 22.5$, $p < .01$, and the effect of relative age approached significance, $F(6, 1396) = 2.04$, $p < .06$. There were no significant interactions. Follow-up univariate ANOVAs and Tukey's HSD tests were then performed.

Peer Acceptance Patterns of Friendship

Peer acceptance level significantly effected the number of high-accepted friends, $F(2, 700) = 43.03$, $p < .01$, and the number of average-accepted friends, $F(2, 700) = 19.68$, $p < .01$, children had. No peer acceptance level differences were found for the number of low-accepted friends children had, $F(2, 700) = .09$, $p > .05$. Low- and average-accepted children had significantly fewer high-accepted friends than did high-accepted children (both at $p < .01$). There were no differences between low- and average-accepted children in the number of high-accepted friends. Low-accepted children had significantly fewer average-accepted friends than both average- and high-accepted children (both at $p < .01$). There were no differences between average- and high-accepted children

for number of average-accepted friends (see Figure 3).

Relative Age Patterns of Friendship

The purpose of this analysis was to examine the relative ages of the friends children had within the classroom. To examine these patterns of friendship, a 3 (relative age) x 3 (peer acceptance level) MANOVA was performed, with number of relatively young friends, number of intermediate age friends, and number of relatively old friends as dependent measures. Gender had no effect and was dropped from the analysis. There were significant multivariate effects of peer acceptance level, $F(6, 1398) = 15.27, p < .01$, and relative age, $F(6, 1398) = 3.17, p < .01$. There were no significant interactions. Follow-up univariate ANOVAs and Tukey's HSD tests were then performed.

Peer acceptance level effects were found for the number of relatively young friends, $F(2, 701) = 6.95, p < .01$, the number of intermediate age friends, $F(2, 701) = 7.99, p < .05$, and the number of relatively old friends, $F(2, 701) = 27.07, p < .01$, children had. Low-accepted children had significantly fewer relatively young friends than did high-accepted children ($p < .01$). No differences were found between low- and average- or average- and high-accepted children for number of relatively young friends. Low-accepted children had significantly fewer intermediate age friends than both average- and high-accepted children (both at $p < .01$). No differences were found between average- and high-accepted children for number of intermediate age friends. Low-, average-, and high-accepted children all significantly differed on number of relatively old friends, with low-accepted children having the fewest, and high-

accepted children having the most (all at $p < .01$, see Figure 4).

Univariate analyses showed significant relative age effects for the number of relatively young friends, $F(2, 701) = 3.09$, $p < .05$, the number of intermediate age friends, $F(2, 701) = 5.23$, $p < .01$, and the number of relatively old friends, $F(2, 701) = 8.12$, $p < .01$, children had. Tukey's HSD analysis showed no differences between relatively young, intermediate age, and relatively old children for number of relatively young friends. Relatively young children had significantly fewer intermediate age friends than did relatively old children ($p < .01$). There were no differences between relatively young and intermediate age children or intermediate age and relatively old children for number of intermediate age friends. Relatively young children had significantly fewer relatively old friends than did relatively old children ($p < .01$). No differences were found between relatively young and intermediate age children or between intermediate age and relatively old children for number of relatively old friends (see Figure 5).

Teacher-Rated Behaviors

It was hypothesized that children with at least one friend would be rated by teachers as having fewer problems and more competencies than children without a friend. Teachers completed the Teacher-Child Rating Scale (T-CRS) (Hightower, et al., 1986) for each child with parental permission. The T-CRS is comprised of 7 composite scales: acting-out (e.g., disruptive in class, fidgety), shy/anxious (e.g., timid, nervous or tense), learning (e.g., underachiever, poor

work habits), frustration tolerance (e.g., ignores teasing, copes with failure), assertive social skills (e.g., defends views, expresses ideas), task orientation (e.g., competes work, well organized), and peer social skills (e.g., is friendly, well liked). The seven composite scales were examined with a Principal Components factor analysis with no rotation. The composite scales loaded on two factors (see Table 2). The acting-out, shy/anxious, and learning scales loaded together on one factor and were combined to form a teacher-rated problems composite, while frustration tolerance, assertive social skills, task orientation, and peer social skills loaded together on the second factor and were combined to form a teacher-rated competence composite.

Social Competence

Preliminary analyses revealed no gender effects, so a 3 (relative age) x 3 (peer acceptance level) x 2 (friendship status) ANOVA was performed with the teacher-rated social competence composite as the dependent measure. Significant main effects were found for peer acceptance level, $F(2, 692) = 88.5$, $p < .01$, and friendship status, $F(1, 692) = 7.382$, $p < .01$. The main effect friendship status was modified by an interaction of friendship status and relative age, $F(2, 692) = 3.71$, $p < .03$. Simple effects analysis was used to examine the interaction and Tukey's HSD tests were performed to examine mean differences.

Peer acceptance level significantly affected teacher-rated social competence. Low-, average-, and high-accepted children all significantly differed on teacher-ratings of social competence, with low-accepted children receiving the poorest ratings and high-accepted children receiving the highest (all at $p <$

.01, see Figure 6).

Simple effects analysis was used to evaluate the interaction of friendship status and relative age for teacher-rated competence. No relative age effects were found for children who had friends, $F(2, 472) = 2.81, p > .05$, or for friendless children, $F(2, 236) = .04, p > .05$, for teacher-rated competence. Significant friendship status effects were found for relatively young children, $F(1, 254) = 8.79, p < .01$, intermediate age children, $F(1, 208) = 22.40, p < .01$, and relatively old children, $F(1, 245) = 18.98, p < .01$. Tukey's HSD analysis showed that relatively young, intermediate age, and relatively old children with at least one friend were rated by their teachers as significantly more socially competent than relatively young, intermediate age, and relatively old children without a friend (all at $p < .01$, see Figure 7). Because friendship status had the same effect for each age group, a true interaction was not found.

Problem Behaviors

Preliminary analyses revealed no gender effects, so a 3 (relative age) x 3 (peer acceptance level) x 2 (friendship status) ANOVA was performed with the teacher-rated problem behaviors composite as the dependent measure. Main effects of peer acceptance level, $F(2, 692) = 103.78, p < .01$, and friendship status, $F(1, 692) = 8.04, p < .01$, were modified by interactions of relative age and peer acceptance level, $F(4, 692) = 2.42, p < .05$, relative age and friendship status, $F(2, 692) = 5.60, p < .01$, and peer acceptance level and friendship status, $F(2, 692) = 3.23, p < .05$. Simple effects analyses were used to examine interactions and Tukey's HSD analyses were used to examine group differences.

Simple effects analyses showed significant peer acceptance level effects for relatively young children, $F(2, 255) = 49.35, p < .01$, intermediate age children, $F(2, 209) = 16.85, p < .01$, and relatively old children, $F(2, 246) = 40.00, p < .01$ for teacher-rated problem behaviors. Tukey's HSD analysis showed that low-, average-, and high-accepted children who were relatively young all significantly differed on teacher ratings of problem behaviors, with low-accepted relatively young children having the most problems, and high-accepted relatively young children having the fewest (all at $p < .01$). Low-accepted intermediate age children had significantly more teacher-rated problems than average- or high-accepted intermediate age children (both at $p < .01$). There were no differences between average- and high-accepted intermediate age children for teacher-rated problem behaviors. Low-accepted relatively old children had significantly more problem behaviors as rated by teachers than average- or high-accepted relatively old children (both at $p < .01$). There were no significant differences between average- and high-accepted relatively old children for teacher-ratings of problem behaviors (see Figure 8).

Simple effects and Tukey's HSD analyses were used to evaluate the interaction of friendship status and relative age for teacher-rated problem behaviors. No relative age effects were found for children who had friends, $F(2, 472) = 3.20, p > .05$, or for friendless children, $F(2, 236) = 1.02, p > .05$ for teacher-rated problem behaviors. Friendship status effects were found for relatively young children, $F(1, 254) = 12.16, p < .01$, intermediate age children, $F(1, 208) = 30.64, p < .01$, and relatively old children, $F(1, 245) = 13.50, p < .01$

for teacher-rated problem behaviors. Relatively young, intermediate age, and relatively old children with at least one friend had significantly fewer problem behaviors than relatively young, intermediate age, and relatively old children without a friend (all at $p < .01$, see Figure 9). Because friendship status had the same effect for each age group, a true interaction was not found.

Simple effects and Tukey's HSD analyses were used to evaluate the interaction of peer acceptance level and friendship status. Friendship status effects were found for low-accepted children, $F(1, 121) = 9.97$, $p < .05$ for teacher-rated problem behaviors. Simple effects analysis showed no significant friendship status effects for average-accepted children, $F(1, 474) = 2.15$, $p > .05$, or high-accepted children, $F(1, 112) = .12$, $p > .05$ for teacher-rated problem behaviors. Tukey's HSD analysis showed that low-accepted children with at least one friend had significantly fewer problems as rated by teachers than low-accepted children without a friend ($p < .01$, see Figure 10). There were no differences between average- and high-accepted children with or without a friend. Although low-accepted children had more problems as rated by teachers than average- or high-accepted children, having a friend seemed to work as a buffer for low-acceptance.

Peer-Rated Social Reputation

In order to examine peer-rated social reputation, a 3 (peer acceptance level) x 3 (relative age) x 2 (gender) x 2 (friendship status) MANOVA was performed with peer-rated aggression, shyness, and social competence as dependent measures. A significant multivariate effect was found for relative age,

$F(6, 1344) = 2.19, p < .05$, and friendship status approached significance, $F(3, 672) = 2.55, p < .06$. A significant interaction was found for peer acceptance level and gender, $F(2, 674) = 3.85, p < .03$. Simple effects analysis was used to examine the significant interaction, and Tukey's HSD analysis was used to examine significant mean differences.

Univariate analysis showed significant relative age effects for peer-rated shyness, $F(2, 674) = 7.69, p < .01$, and peer-rated aggression, $F(2, 674) = 10.34, p < .01$. No relative age differences were found for peer-rated social competence, $F(2, 674) = 1.12, p > .05$. Relatively young and intermediate age children were seen as significantly shyer by peers than were relatively old children (both at $p < .05$). There was no difference between relatively young and intermediate age children for peer-rated shyness. Relatively old children were rated as significantly more aggressive than were relatively young or intermediate age children (both at $p < .01$, see Figure 11). There were no differences between relatively young and intermediate age children for peer-rated aggression. There were no differences between relatively young, intermediate age, and relatively old children for peer-rated social competence.

Univariate analysis showed significant friendship status effects for peer-rated social competence, $F(1, 674) = 10.00, p < .01$. Children with at least one friend were rated by their peers as significantly more socially competent than friendless children. No friendship status effects were found for peer-rated shyness, $F(1, 674) = 2.77, p > .05$, or peer-rated aggression, $F(1, 674) = .027, p > .05$, (see Figure 12). It should be noted that this result agrees with the findings

from the teacher-rating data.

Simple effects analyses revealed significant effects of peer acceptance level for peer-rated aggression for boys, $F(2, 367) = 67.96, p < .01$, and girls, $F(2, 339) = 57.79, p < .01$. For boys, all means significantly differed, with low-accepted boys rated as most aggressive and high-accepted boys rated as least aggressive (all at $p < .01$). Low-accepted girls were rated as significantly more aggressive than both average- and high-accepted girls ($p < .01$). Simple effects analyses revealed significant effects of gender for low-accepted children, $F(1, 121) = 28.80, p < .01$, and average-accepted children, $F(1, 474) = 64.60, p < .01$ for peer-rated aggression. No significant gender effects were found for high-accepted children, $F(1, 112) = 3.00, p > .05$ for peer-rated aggression. Low- and average-accepted boys were rated as significantly more aggressive than low- and average-accepted girls (both at $p < .01$). There was no difference between high-accepted boys and high-accepted girls for peer-rated aggression (see Figure 13).

Characteristics of Low-Accepted Children's Friends

It was hypothesized that low-accepted children with average- or high-accepted friends would be more socially competent as measured by teacher ratings than low-accepted children with low-accepted friends and low-accepted children with no friends. To test this hypothesis, three groups were compared via two ANOVAs (low-accepted children with no friends, low-accepted children with at least one low-accepted friend, low-accepted children with at least one average- or high-accepted friend) with teacher-rated social competence as the

dependent variable in one analysis and teacher-rated problem behaviors as the dependent variable in the other. For teacher-rated competence, a significant main effect of friendship status was found, $F(2, 119) = 8.9, p < .01$. Tukey's HSD analysis showed that low-accepted children with average- or high-accepted friends were rated by their teachers as significantly more competent than were low-accepted children with low-accepted friends ($p < .01$) and friendless low-accepted children ($p < .05$, see Figure 14).

For teacher-rated problem behaviors, a significant main effect of friendship status was found, $F(2, 199) = 6.01, p < .01$. Tukey's HSD analysis was used to examine mean differences. Low-accepted children with low-accepted friends were rated by teachers as having significantly more problem behaviors than were low-accepted children with average- or high-accepted friends ($p < .05$). Low-accepted children with low-accepted friends and low-accepted children with average- or high-accepted friends did not significantly differ in problem behaviors from friendless low-accepted children (see Figure 15).

Prediction of Social Information Processing Variables

It was hypothesized that social information processing skills (i.e., encoding accuracy, emotion discrimination, intention attribution, and giving socially appropriate responses to provocations) would be uniquely predicted by friendship status (having a friend or not) and peer acceptance level. Multiple regression analyses assessed the contributions of gender, grade, peer acceptance level, and friendship status to the prediction of social information

processing skills. Gender was entered first as a control variable, followed by grade for both analyses. In one analysis, peer acceptance level was entered next, followed by friendship status. In the other analysis, the order of the peer relations variables was reversed. Results are summarized in Tables 3 through 7. Tables report the first order of entry only since there was no change when using the second order. In one set of analyses, the criterion variable was the overall score across all stories for each social information processing step; in the other set, the total for each type of story (happy, angry, sad) was used as the criterion variable. Results for the happy, angry, and sad story analyses are presented only when they differ from the results of the overall scores.

The total variance accounted for in encoding accuracy was 6%. Grade accounted for 5% ($p < .01$), and was the only significant predictor (see Table 3). Emotion discrimination was not significantly predicted by any of the variables ($R^2 = 1\%$, $p > .05$, see Table 4). The total variance accounted for in intention attribution was 2%. Gender accounted for .8% ($p < .05$), grade accounted for .6% ($p < .05$), and friendship status accounted for .7% ($p < .05$) in intention attribution. There were no other significant predictors of intention attribution (see Table 5). The total variance accounted for in friendliness/hostility of response was 3%. Gender accounted for 1% ($p < .05$), and grade accounted for 1% ($p < .05$) in friendliness/hostility of response. There were no other significant predictors for friendliness/hostility of response (Table 6). The total variance accounted for across stories for assertiveness/passivity of response was nonsignificant. However, for angry stories, peer acceptance level was a

significant predictor even after the effects of friendship status had been removed (R^2 change = 1%, $p < .01$, see Table 7).

Chapter IV

Discussion

Patterns of children's friendships in ungraded primary classrooms, and the relationship between friendship status and several indices of competence were examined. A child's age relative to ungraded primary classmates and peer acceptance level were both found to influence the number and type of friends he/she had. Supporting hypothesis 1, high-accepted children -- as well as those who were relatively older -- had the most reciprocated friendships, while low-accepted and relatively young children had the least. Hypothesis 2 was supported by the teacher and peer ratings. For teacher-rated competencies and problem behaviors, having a friend was beneficial despite one's peer acceptance level or relative age. Children with at least one friend were rated by teachers as more socially competent and as having fewer problem behaviors than were children with no friends. In addition, children with at least one friend were rated by peers as more socially competent than were friendless children. Relatively older children in the classroom were seen as the least shy and the most aggressive by peers. Low- and average-accepted boys and low-accepted girls were rated by peers as more aggressive than high-accepted boys and girls. Not only having a friend but the type of friend one had proved to be important. These data supported hypothesis 3. Low-accepted children with average- and

high-accepted friends were seen as more competent and less problematic than low-accepted children with low-accepted friends and friendless low-accepted children. Hypothesis 4 was not supported because peer acceptance level and friendship status did not uniquely predict social information processing variables.

Effects of Relative Age and Peer Acceptance on Number of Friends

Relatively younger children were found to have fewer friendships than intermediate age and relatively old children. Lemerise (1997) found that relatively young children were less accepted by classmates within the mixed-age setting. Because low-accepted children within a classroom have been found to have fewer friends than high-accepted children (Caverly, 1997; Parker & Asher, 1993), it follows that the lack of friendships for relatively younger children is a result of their low-accepted status.

What is not as clear is why relatively younger children are low-accepted. It is possible that younger children within the classroom simply lag behind developmentally in social skills; they have not had the same amount of time or as many opportunities as the older children in the classroom to develop the skills needed to form and maintain friendships. Indeed, the present study found that classmates rated relatively younger children as shyer than their relatively older classmates. Results of the present study could be based on the composition of the mixed-age classroom. Often within this setting older children are used as tutors or helpers for the younger children to assist them in learning. Often seen as role models, the older children within the class may have more friends because of their status and visibility within the classroom. A future avenue of

research would be to examine the friendships of relatively younger children on a broader basis than the classroom. Perhaps relatively younger children, although lacking friends in the classroom, have reciprocated friends found in other settings such as their neighborhood or simply children in another class. However, it must be noted that not having friends within the classroom is important. Children spend a significant portion of each day at school, and past research has shown that having a friend within the classroom is beneficial both academically and socially (Caverly, 1997; Diehl, et. al., 1998; Ladd, 1990). The repercussions of not having a friend in the classroom for relatively younger children should not be overlooked.

The data support previous findings by Parker and Asher (1993) in that although low-accepted children were more likely to be friendless, some low-accepted children did indeed have friends. Also, high-acceptance did not guarantee friendship. In this sample, 11% of high-accepted children did not have a friend, as in the Parker and Asher (1993) study. Perhaps high-accepted children, although admired by the group, simply have failed to form a one-on-one relationship with another child. Also, it could be that since the children were permitted to nominate only 3 classmates for “who do you like to work and play with best?”, the high-accepted children truly had friends in the class, but the limitation of three nominations prevented reciprocation.

An interaction of gender and peer acceptance level was found for number of reciprocated friendships. For boys, all acceptance groups differed, with low-accepted boys having the least and high-accepted boys having the most. This

trend differed for girls. Although high-accepted girls had more reciprocated friendships than average- or low-accepted girls, there was no difference between low- and average-accepted girls for number of friendships. This finding suggests peer acceptance differences in friendship seem to be greater for boys than for girls; that is, low- and average-accepted boys appear to be different, but that difference is not as clear for girls. Future research needs to address these gender differences.

Patterns of Friendship with Children From Different Peer Acceptance Groups

Examination of peer acceptance patterns of friendship showed that low-accepted children had fewer average-accepted friends than average- and high-accepted children, and low- and average-accepted children had fewer high-accepted friends than high-accepted children. No difference was found between low-, average-, and high-accepted children for number of low-accepted friends. This research confirms previous findings (Caverly, 1997). Bichard and colleagues (1988) suggest that the interactions of accepted children are characterized by more positive reinforcement and better communication skills. In addition, accepted children demonstrate leadership skills that are beneficial in maintaining a friendship. Thus, the relationship skills high-accepted children have mastered work best with someone else who also has these skills. Perhaps high-accepted children do not find the same reciprocity in friendships with less well-accepted and less skilled classmates. One could hypothesize that for these reasons high-accepted children tend to group together for friendship.

Patterns of Friendship with Children from Different Relative Age Groups

Examination of relative age patterns of friendship showed that low-accepted children had fewer relatively young friends than high-accepted children. No differences were found between low- and average- or average- and high-accepted children for number of relatively young friends. Low-accepted children also had fewer intermediate age friends than both average- and high-accepted children. No differences were found between average- and high-accepted children for number of intermediate age friends. Low-, average- and high-accepted children all differed on number of relatively old friends, with low-accepted children having the fewest, and high-accepted children having the most. Low-accepted children had fewer friends of any age than average- or high-accepted children.

What is interesting about these findings is that peer acceptance group differences were found for having relatively old friends. Although previous analyses showed no difference in the number of reciprocated friendships for intermediate age and relatively old children, the difference appears when the peer acceptance level of the child is considered. Here, high-accepted children have more relatively older friends than average- or low-accepted children. This outcome is consistent with the findings of Ladd (1983). However, for intermediate age friends, the difference between average- and high-accepted children is not as apparent. Perhaps it reverts back to Parker and Gottman's (1989) theory of friendship. They argue that early interactions serve as building blocks for future interactions. Relatively younger children, as well as low-

accepted children who lack social experiences, have not had the opportunity to form the beginning relationships that are necessary first steps for interacting in a more complex relationship. Perhaps high-accepted children and those who are relatively old have had the opportunity to build those skills Parker and Gottman believe are necessary for future interaction.

Teacher-Rated Behaviors

Teachers provide valuable information about children's adjustment within the classroom. The teacher's input on a child's reputation is an important component of the child's overall social functioning. When examining teacher-rated social competence by peer acceptance level, all groups differed with low-accepted children rated as the least socially competent and high-accepted children rated as the most socially competent. Because the T-CRS measures both academic and social functioning, this result is not surprising based on research concerning the poor social skills of low-accepted children (Ladd, 1988). The results showed that children with at least one friend, regardless of relative age, were rated by teachers as more socially competent and as having fewer problem behaviors than children of the same relative age who did not have a friend.

The peer acceptance level and friendship status interaction for teacher-rated problem behaviors showed that low-accepted children with a friend had fewer problem behaviors than low-accepted children without a friend; there were no friendship status differences between average- and high-accepted children for teacher-rated problem behaviors. The suggestion is that having a friend acts

as a buffer for low-accepted children. For average- and high-accepted children, acceptance from the group seems to be a buffer against problem behaviors, but low-accepted children who do not enjoy group approval seem to gain the same type of support (although perhaps not to the same degree) from having at least one friend.

Peer-Rated Social Reputation

After examining the teacher's point of view, peers' ratings of social competence were examined. From the peers' view, relatively young and intermediate age children were seen as more shy than relatively old children, and relatively old children were seen as more aggressive. There was a peer acceptance level by gender interaction for peer-rated aggression. Low-, average- and high-accepted boys all differed on aggression ratings, and low-accepted girls were rated as more aggressive than average- or high-accepted girls. There were no differences between high-accepted boys and girls for peer ratings of aggression. It seems as if these results go hand-in-hand. It is logical that if relatively older children are seen as more aggressive, they would be also viewed as less shy. Perhaps the older children in the class, because of their roles as tutors or role models for younger students, feel that they have power or status over their classmates. This "power" may be expressed either positively or negatively. From the interaction of peer acceptance level and gender for aggression, it seems that the way this power is expressed differs according to a child's social acceptance and gender. Whereas low- and average-accepted boys and low-accepted girls were viewed as more aggressive by their peers than

high-accepted children, there were no differences between high-accepted boys and girls for aggression ratings. Possibly the high-accepted children have more positive ways of handling their status within the classroom than do their less accepted counterparts.

Characteristics of Low-Accepted Children's Friends

Once the benefit of having a friend for low-accepted children was established, it was important to examine the type of friends low-accepted children had. Would having any type of friend make a difference, or does the type of friend influence the benefits of having a friend? Low-accepted children were grouped according to the type of friend they had (low-accepted friend, average- or high-accepted friend, or no friend) and then compared on teacher-rated competence and problem behaviors. For teacher-rated competence, low-accepted children with average- or high-accepted friends were seen as more competent than low-accepted children with low-accepted friends and friendless low-accepted children. Similarly, for teacher-rated problem behaviors low-accepted children with average- or high-accepted friends were seen as having fewer problem behaviors than low-accepted children with low-accepted friends. These results seem to suggest a tutoring effect for low-accepted children. Less accepted children who interact in a one-on-one friendship relationship with someone more socially skilled than themselves have opportunities to observe socially competent behaviors. This finding seems to suggest that not only do low-accepted children observe and learn these competent behaviors but they also incorporate the behaviors into their interactions to the extent that they can

be noticed by others as evidenced by the teacher ratings.

Prediction of Social Information Processing Variables

Peer acceptance level and friendship status were not very helpful in the prediction of the social information processing variables (encoding accuracy, emotion discrimination, intention attribution, and giving socially competent responses to a provocation). The exception was that peer acceptance level predicted assertiveness/hostility for angry stories. Perhaps this lack of support is due to the fact that the video-taped situations the children viewed are a very narrow avenue in which to examine social competence. Peer acceptance level and friendship status may make a difference in global measures of social competence such as teacher and peer ratings where the rater has multiple experiences upon which to draw when evaluating the child. Possibly the provocation situations used here are too specific and removed from the child's everyday experience to see peer acceptance level and friendship status effects.

Limitations

Although every effort was made to conduct this research in an experimentally sound manner, this study does have limitations. First, in studying the dynamics of the classroom, not all students participated. Although 70% participation for the class as a whole was required to participate in the study, some children failed to return permission forms, or their parents elected to have them not participate in the research. This point should be kept in mind when discussing reciprocated friendships. It is possible that children who in our data appear friendless might be friends with someone who did not participate in the

research; the child could have nominated someone who had no way of nominating him/her back because of their non-participation. In our sample, only 13% (281 of 2103) of the total number of friendship nominations went to nonparticipating children. Because of the high participation rate of classes included in our study, one can have more confidence in our friendship pattern results than if participation rates were lower.

Another consideration is the fact that children were permitted to nominate only three classmates for “who do you like to work and play with the most?”. It is possible that if children were allowed to nominate more than three classmates, some friendless children would have had their nominations reciprocated. Similarly, children were permitted to nominate only those children within their classroom. Children may have had friends outside the classroom, but no friendships with their classmates. If this is the case, it is not entirely correct to say they are friendless; they could possibly be benefitting from a friendship that we were unable to identify. However, being friendless in the classroom is an important consideration and should not be overlooked.

Although participating children were from five different elementary schools from two school districts, participants were from a limited geographical area. Caution should be taken when generalizing these results to other populations. Likewise, mixed-age classrooms studied were mandated by the Kentucky Education Reform Act. The dynamics of classrooms under this system may be different from other mixed-age groups, and generalization beyond this system should be cautioned.

Because of the variables of interest, random assignment and systematic manipulation of certain variables was not possible. This point must be considered when examining friendship patterns and the relationship between having a friend and indices of competence.

A limitation of the social information processing interview is that although the stories were videotaped, they were hypothetical situations and involved children with whom the participant had no past relationship. Perhaps intention attributions and responses made in a real-life situation where the child's reputation or ego was involved would be predicted by peer acceptance level and friendship status.

Future Directions

Future research in this area should examine friendship patterns on a broader basis. Examining friendship within a child's grade instead of within their class would be a positive step. By broadening the field, a researcher can be more sure that results would show a true representation of who has friends and who is friendless. Additionally, longitudinal study of children's friendship is an important consideration. This type of research would give evidence concerning how stable children's friendships are and information about the characteristics of those who maintain stable relationships and those who do not. Likewise, longitudinal study would be beneficial in determining if there are differences between having a series of friends over a period of time and having the same friend over a period of time. In other words, are there different benefits from having a series of different friends versus having the same friend over time?

That study would be an interesting one and would add further to the peer relations literature. Perhaps that information would somehow relate to friendship patterns found in this study.

Further examination of the dynamics of the mixed-age classroom is needed, specifically to determine why relatively younger children are seen as less accepted. In-depth study of the specific dynamics of how the classroom is structured (relatively older children as tutors, or relatively younger children separated from older children most of the day, etc.) would be important in understanding why friendship patterns such as those found in this study occur. It is possible that the dynamics of the classroom influence friend formation, and these dynamics need to be addressed.

Also, other measures of social competence should be used to further validate findings in this study. Observational data, parent report, and perhaps more comprehensive teacher and peer ratings would add to the understanding of how having a friend is beneficial for children.

The information in this study has added to the peer relations literature through examining friendship from a mixed-age perspective, and has added to theory and practical research procedures for working in this setting. The information has shown that several aspects of the mixed-age environment are similar to same-age settings, such as those studied by Parker and Asher (1993). It has also shown that the dynamics of the mixed-age setting are different from same-age settings, and these differences need to be examined further.

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Table 1

Reciprocated Friendships: Descriptive Statistics

<u>Type of Friend By Peer Acceptance Level</u>					
<u>Peer Acceptance Level</u>	<u>None</u>	<u>Low</u>	<u>Average</u>	<u>High</u>	<u>Total Friendships</u>
Low (n=122)	77	13	37	12	62
Average (n=475)	147	37	355	106	498
High (n=113)	12	10	99	78	187

<u>Type of Friend By Relative Age</u>					
<u>Relative Age</u>	<u>None</u>	<u>Young</u>	<u>Intermediate</u>	<u>Old</u>	<u>Total Friendships</u>
Young (n=255)	91	100	60	72	232
Intermediate (n=209)	77	62	73	83	218
Old (n=246)	68	72	100	129	301

Table 2

Factor Loadings for Composite Scales of the Teacher-Child Rating Scale

(Hightower, et al., 1986)

<u>Scale</u>	<u>Factor 1</u>	<u>Factor 2</u>
Acting out	.761	-.484
Shy/anxious	.677	-.578
Learning	-.800	.028
<hr/>		
Frustration Tolerance	.364	.818
Assertive Social Skills	-.458	.769
Task Orientation	.023	.918
Peer Social Skills	.091	.842

Table 3

Summary of Hierarchical Regression Analysis Predicting Encoding Accuracy

<u>Variable</u>	<u>R² change</u>	<u>B</u>	<u>SE B</u>	<u>β</u>
Step 1:				
gender	.000	.0006	.008	.003
Step 2:				
gender	.054**	.0003	.008	-.001
grade		-.0256	.004	-.233*
Step 3:				
gender	.000	-.0003	.008	-.001
grade		-.0255	.004	-.232*
peer acceptance		.0005	.004	-.005
Step 4:				
gender	.001	.0003	.008	-.001
grade		.0258	.004	-.235*
peer acceptance		-.0022	.004	-.020
friendship status		.0093	.009	.040

R² = .055 (total adjusted R² = .050)

*p < .05

Table 4

Summary of Hierarchical Regression Analysis Predicting Emotion Discrimination

<u>Variable</u>	<u>R² change</u>	<u>B</u>	<u>SE B</u>	<u>β</u>
Step 1:				
gender	.000	.0160	.084	.010
Step 2:				
gender	.004	.0167	.084	.010
grade		.0515	.041	-.065
Step 3:				
gender	.000	.0165	.084	.010
grade		-.0527	.042	-.067
peer acceptance		.0100	.043	.012
Step 4:				
gender	.001	.0137	.084	.008
grade		-.0529	.042	.067
peer acceptance		.0008	.047	.001
friendship status		.0520	.099	.031

R² = .005 (total adjusted R² = -.006)

*p < .05

Table 5

Summary of Hierarchical Regression Analysis Predicting Intention Attribution

<u>Variable</u>	<u>R² change</u>	<u>B</u>	<u>SE B</u>	<u>β</u>
Step 1:				
gender	.008*	.0926	.039	.092*
Step 2:				
gender		.0942	.039	.093*
grade	.006*	.0391	.019	.078*
Step 3:				
gender		.0940	.039	.093*
grade		.0387	.019	.078*
peer acceptance	.000	.0040	.019	.008
Step 4:				
gender		.0936	.039	.092*
grade		.0411	.019	.082*
peer acceptance		.0211	.021	.043
friendship status	.007*	-.0964	.045	-.089*

R² = .021 (total adjusted R² = .015)

*p < .05

Table 6

Summary of Hierarchical Regression Analysis Predicting Friendliness/Hostility of Response

<u>Variable</u>	<u>R² change</u>	<u>B</u>	<u>SE B</u>	<u>β</u>
Step 1:				
gender	.008*	.1460	.064	.088*
Step 2:				
gender		.1490	.063	.090*
grade	.009*	.0778	.031	.095*
Step 3:				
gender		.1450	.063	.087*
grade		.0726	.031	.088*
peer acceptance	.005	.0597	.031	.073
Step 4:				
gender		.1460	.063	.088*
grade		.0703	.031	.086*
peer acceptance		.0424	.034	.052
friendship status	.003	.0966	.073	.055

R² = .025 (total adjusted R² = .019)

*p < .05

Table 7

Summary of Hierarchical Regression Analysis Predicting Assertiveness/Passivity of Response for Angry Stories

<u>Variable</u>	<u>R² change</u>	<u>B</u>	<u>SE B</u>	<u>β</u>
Step 1:				
gender	.000	.0145	.065	.008
Step 2:				
gender		.0149	.065	.009
grade	.000	.0084	.032	.010
Step 3:				
gender		.0152	.065	.009
grade		.0094	.032	.011
friendship status	.000	.0256	.069	-.014
Step 4:				
gender		.0107	.065	.006
grade		.0055	.032	.007
friendship status		-.0969	.075	-.053
peer acceptance	.008*	.0841	.035	.100*

R² = .009 (total adjusted R² = .003)

*p < .05

Figure Captions

Figure 1. Effect of relative age on number of friendships.

Figure 2. Peer acceptance and gender effects on number of friendships.

Figure 3. Peer acceptance patterns of friendship.

Figure 4. Peer acceptance and relative age of friends.

Figure 5. Relative age patterns of friendship.

Figure 6. Effects of peer acceptance on teacher-rated competence.

Figure 7. Relative age and friendship status effects on teacher-rated competence.

Figure 8. Peer acceptance and relative age effects on teacher-rated problem behaviors.

Figure 9. Relative age and friendship status effects on teacher-rated problem behaviors.

Figure 10. Peer acceptance and friendship status effects on teacher-rated problem behaviors.

Figure 11. Relative age and peer-rated social reputation.

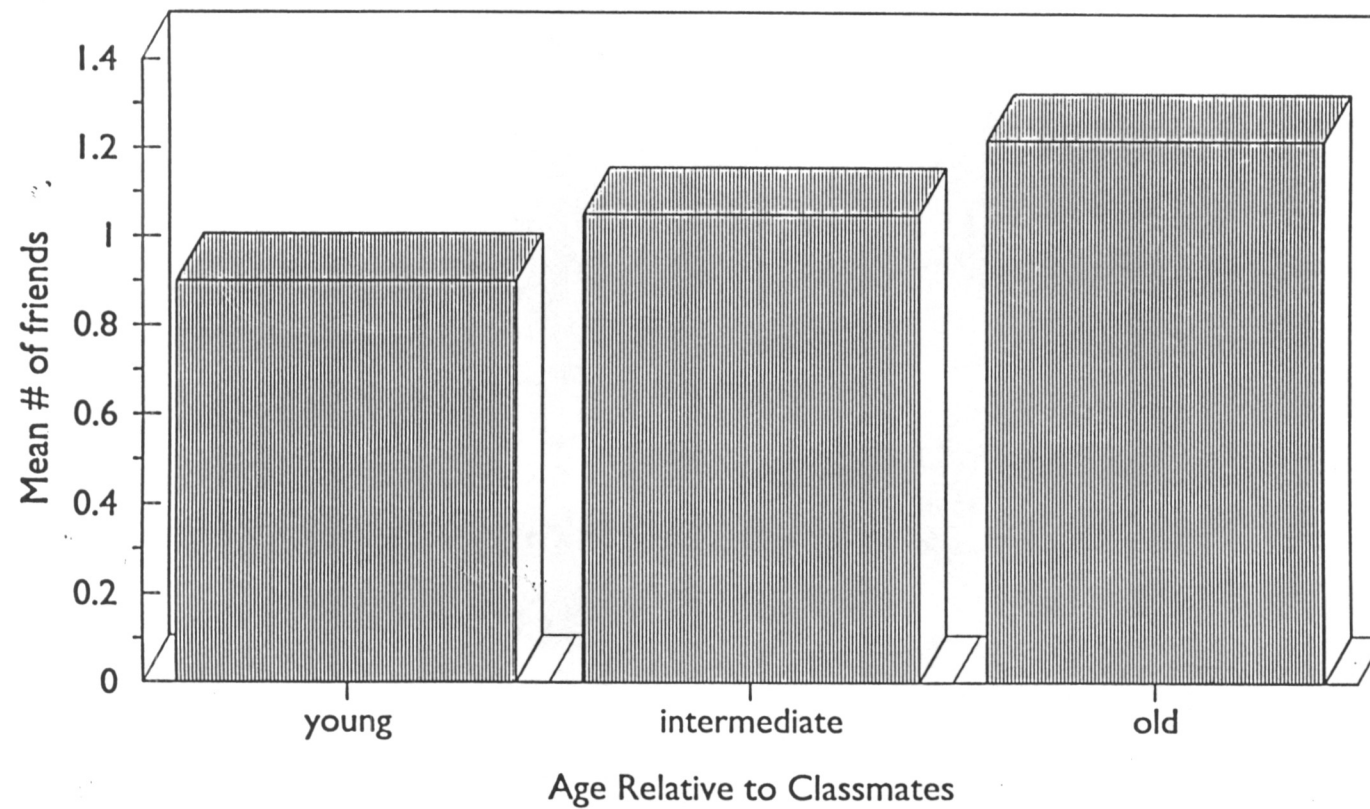
Figure 12. Effects of friendship status on peer-rated social reputation.

Figure 13. Gender and peer acceptance effects on peer-rated aggression.

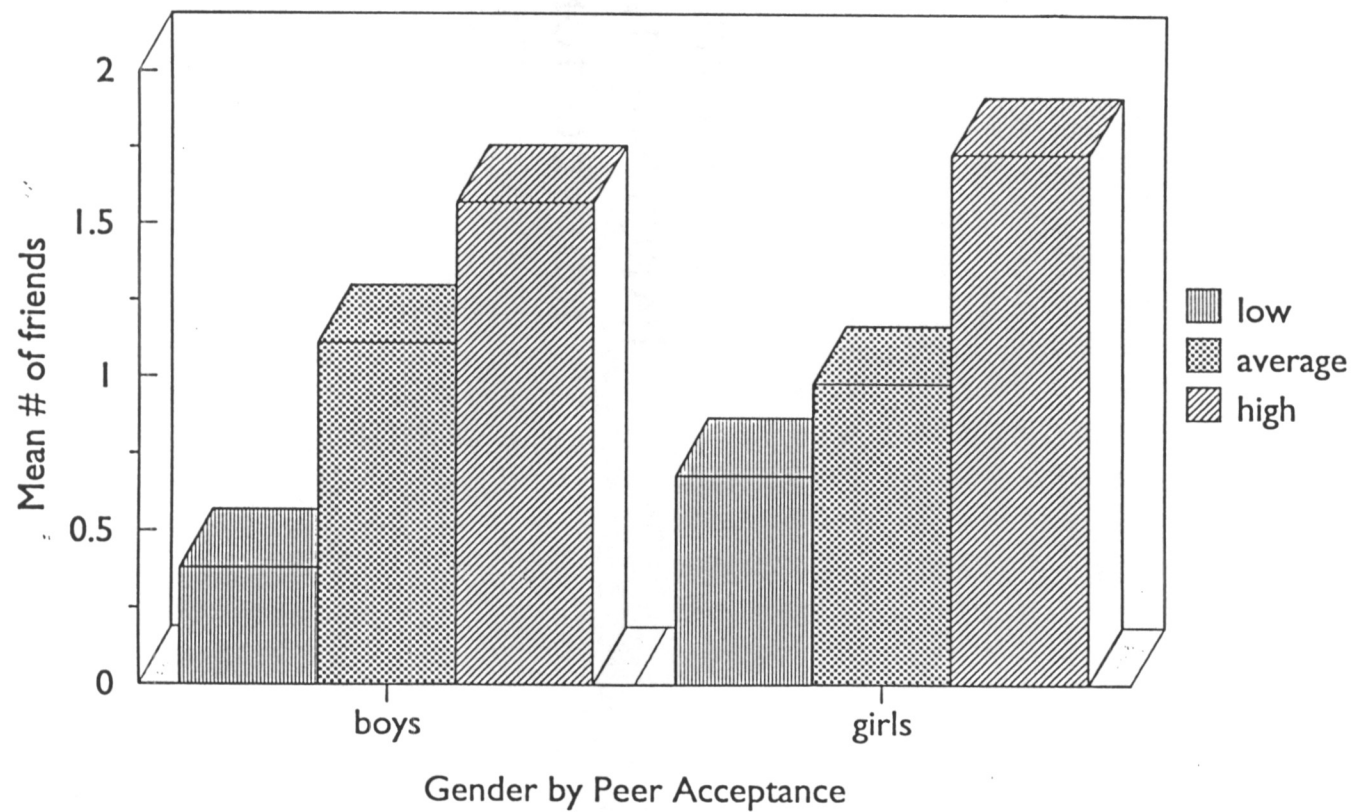
Figure 14. Low-accepted children's competence by friend type.

Figure 15. Low-accepted children's problems by friend type.

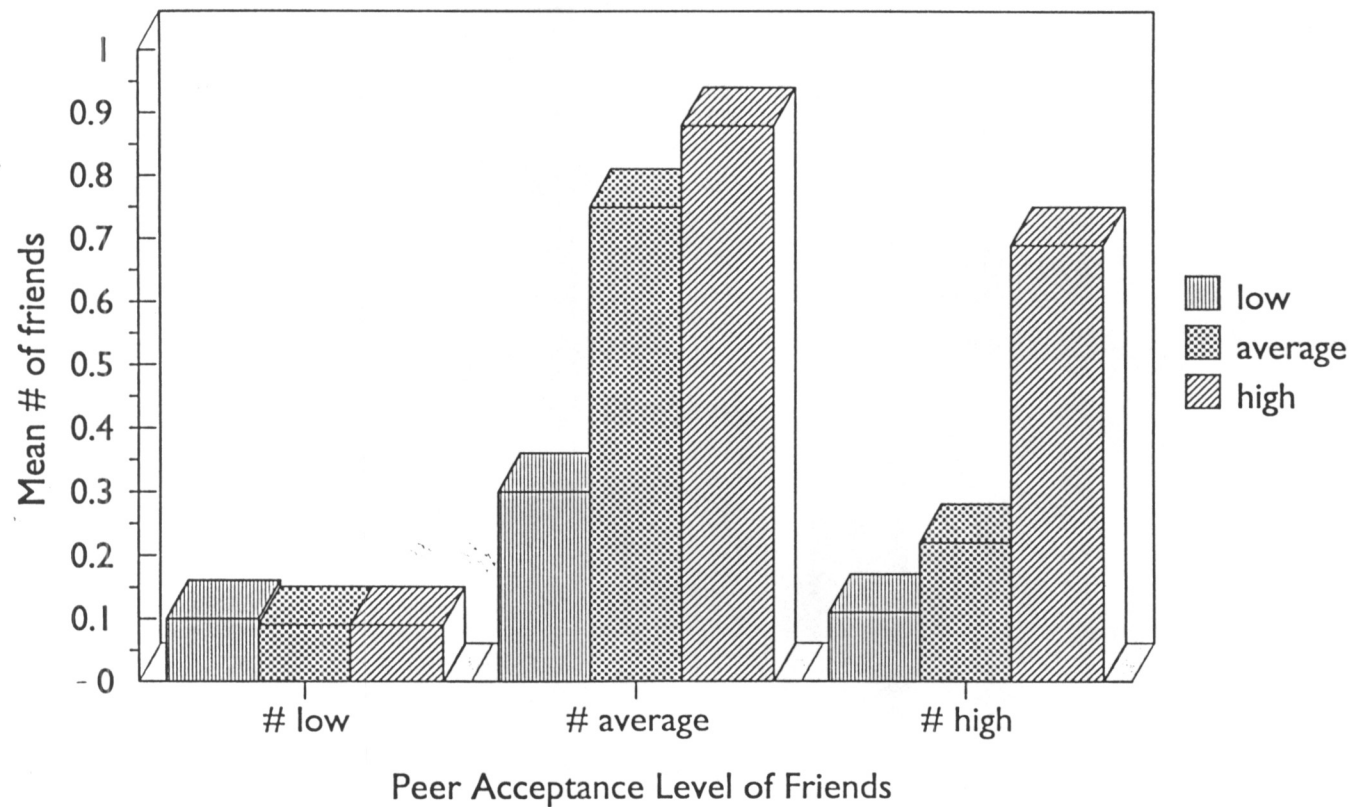
Relative Age and Number of Friendships



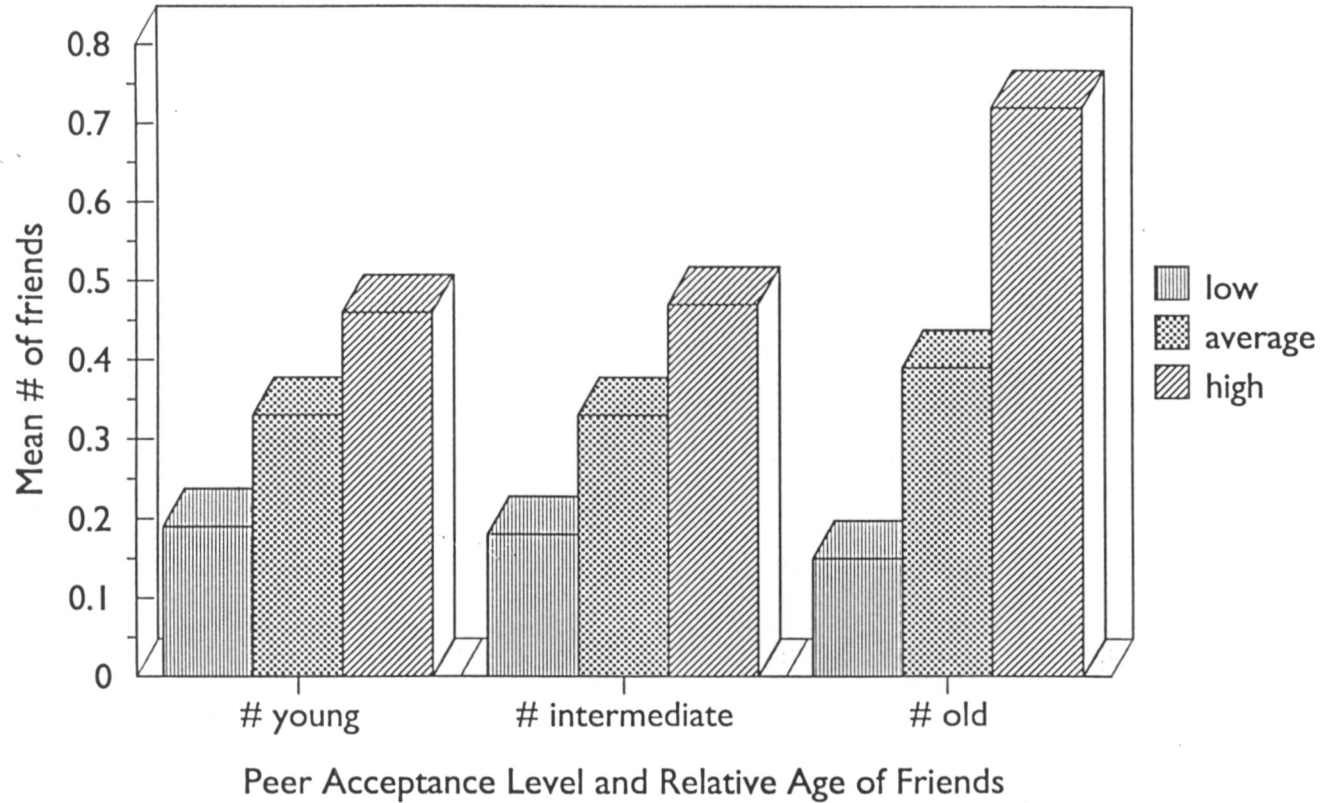
Number of Friends by Peer Acceptance and Gender



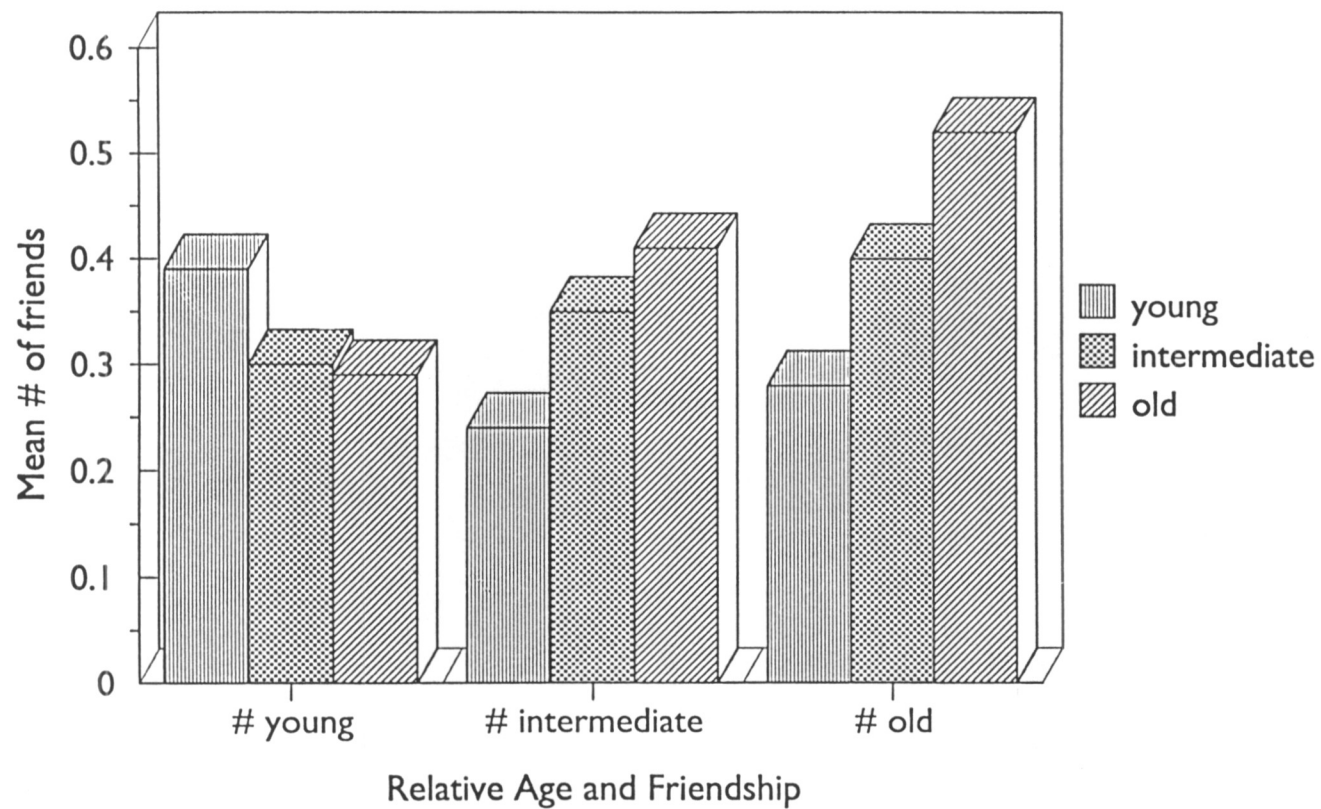
Peer Acceptance Patterns of Friendship



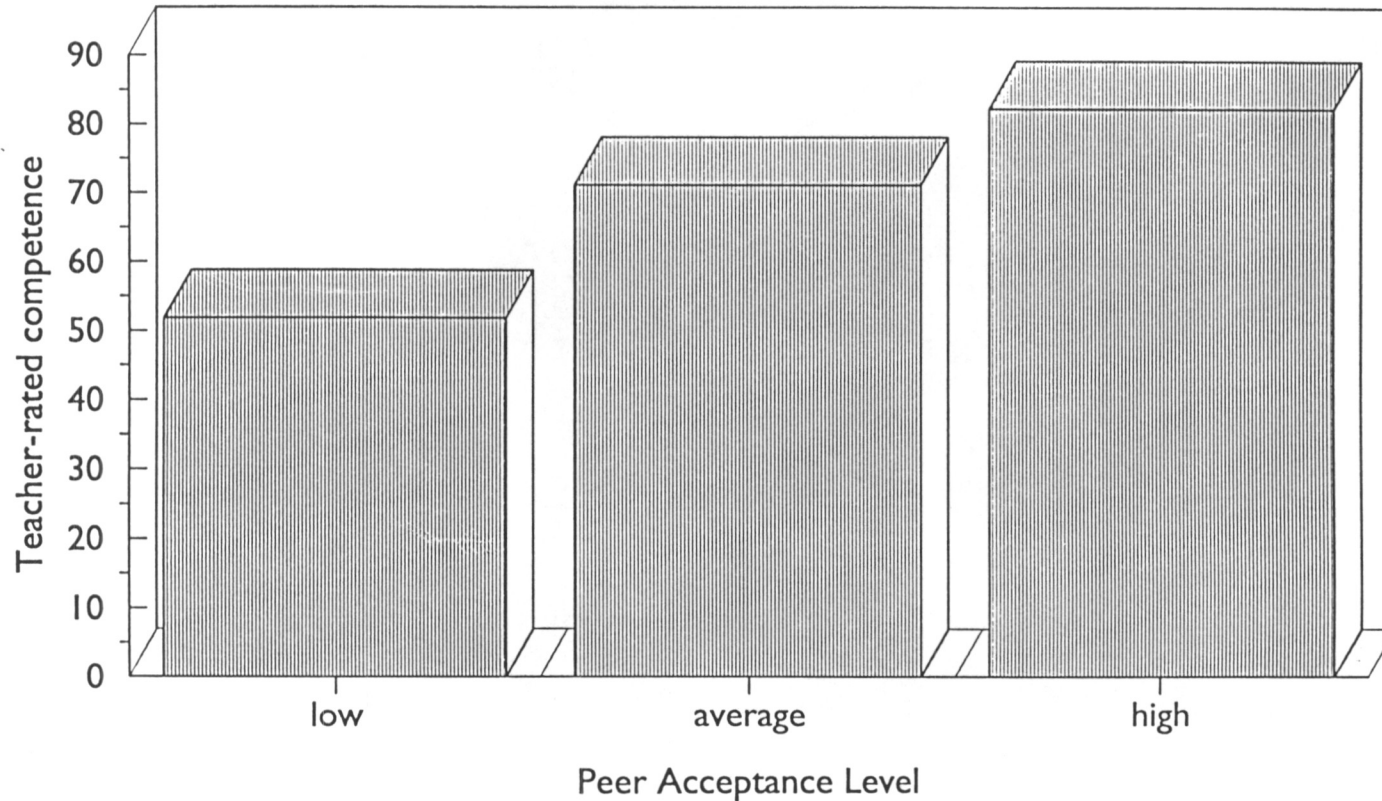
Peer Acceptance and Relative Age of Friends



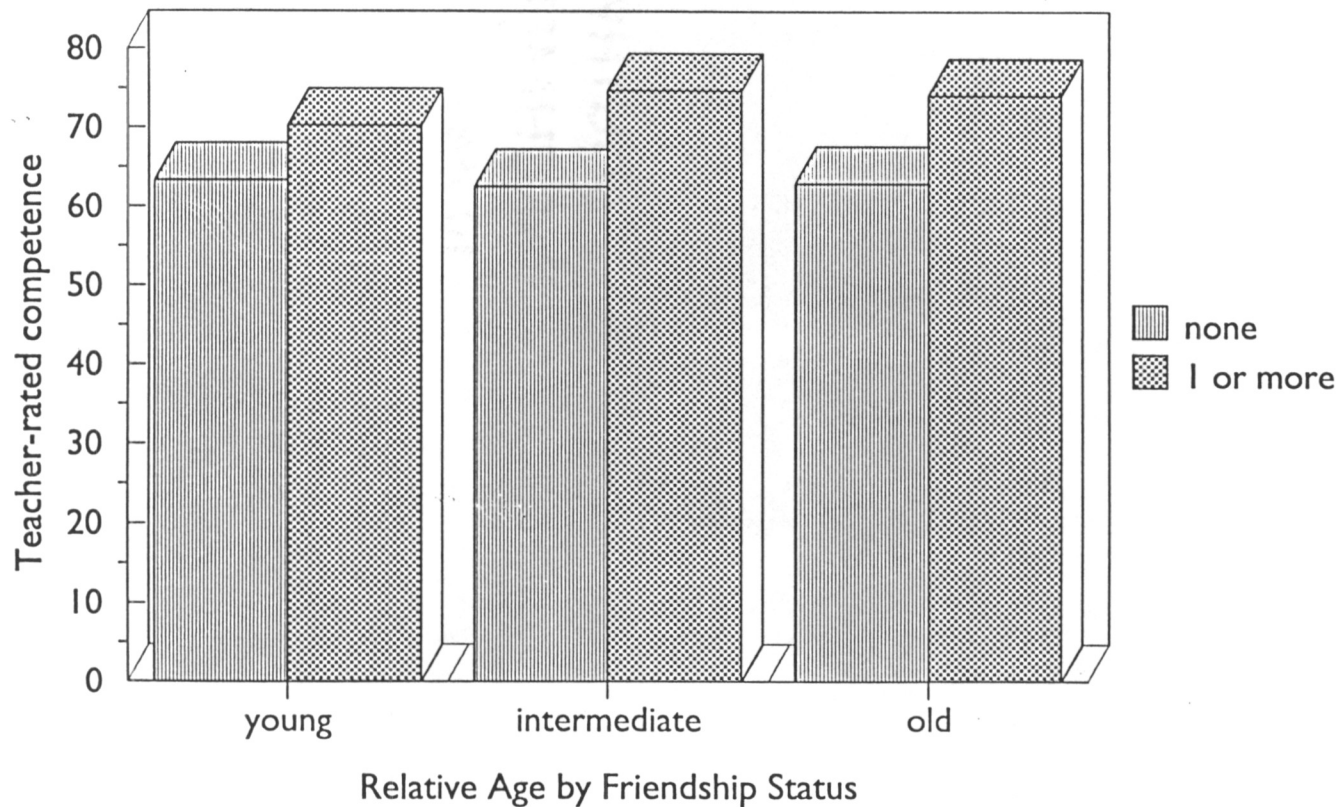
Relative Age Patterns of Friendship



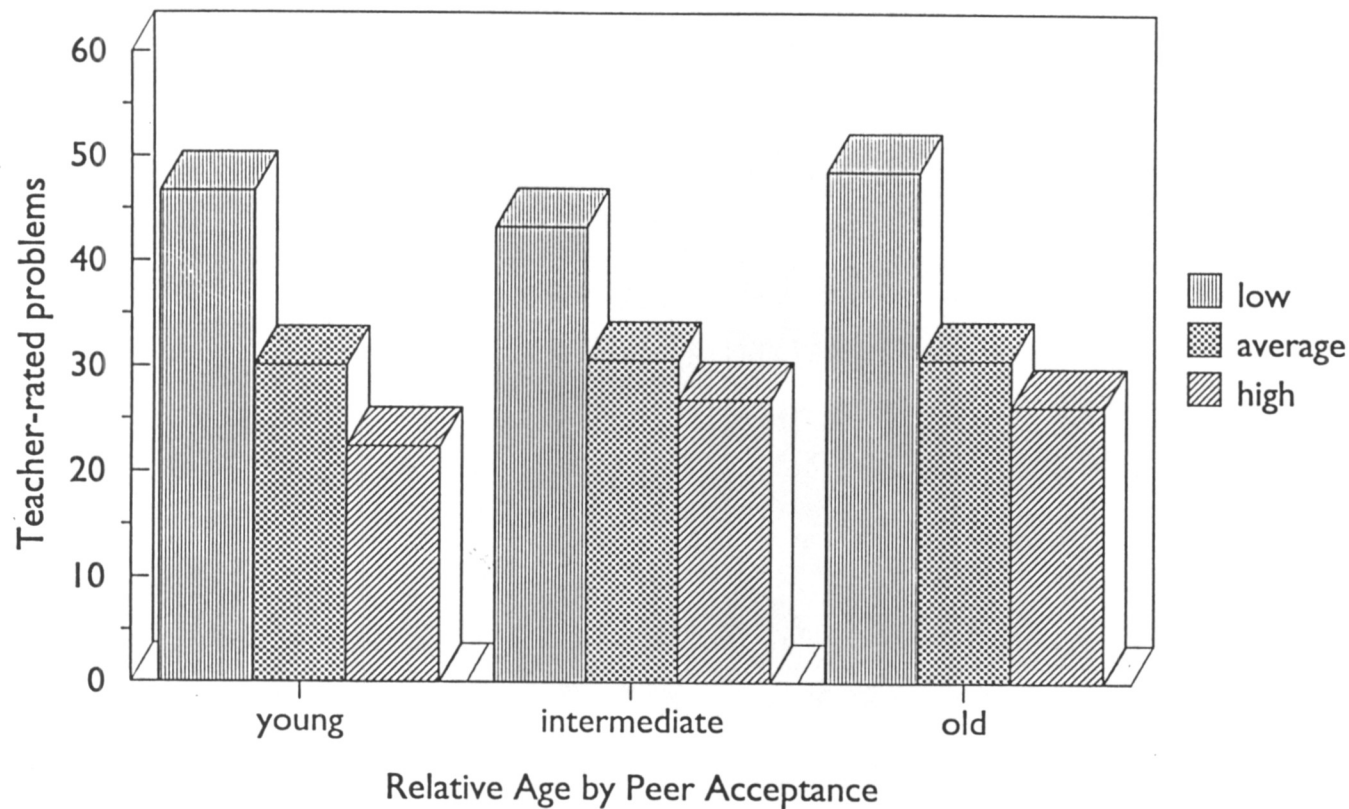
Peer Acceptance and Teacher-Rated Competence



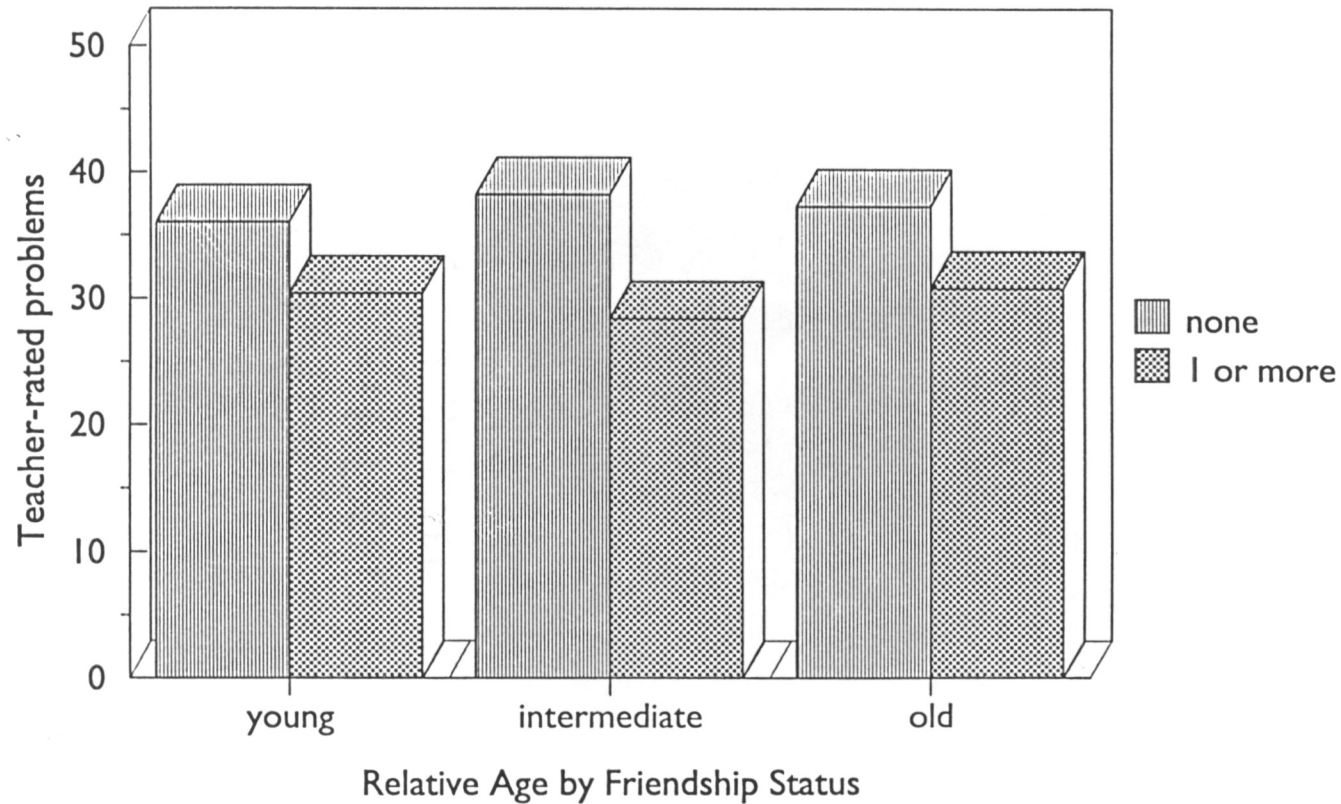
Teacher-Rated Competence: Relative Age & Friendship Status



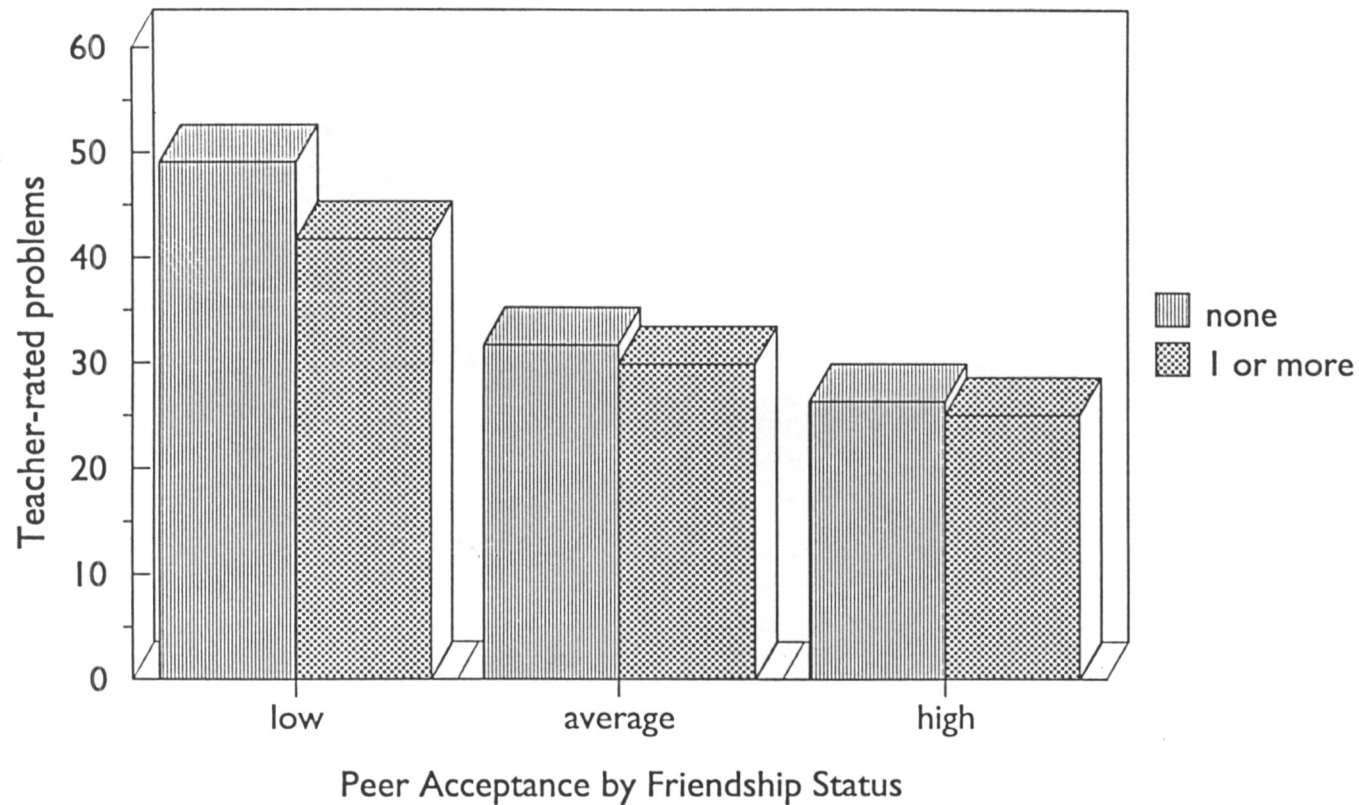
Teacher-Rated Problems: Peer Acceptance by Relative Age



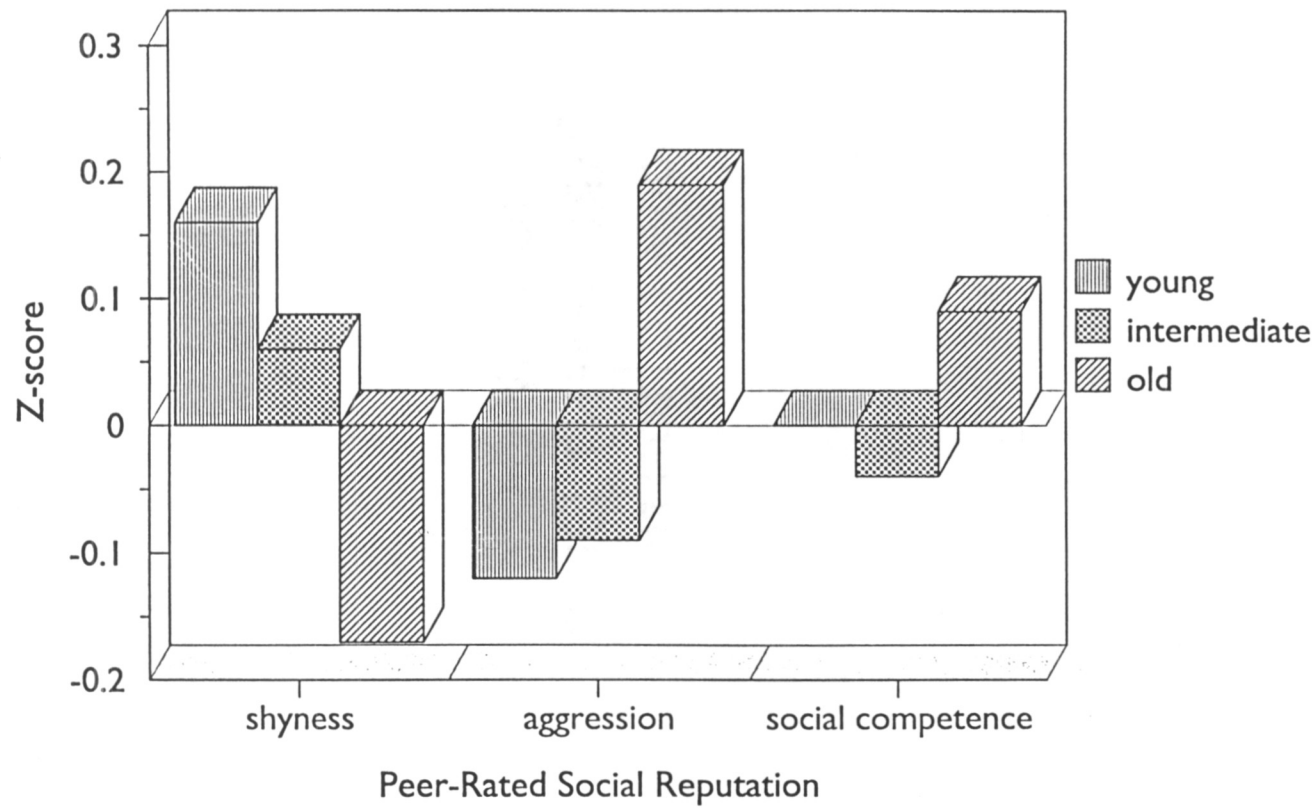
Teacher-Rated Problems: Relative Age & Friendship Status



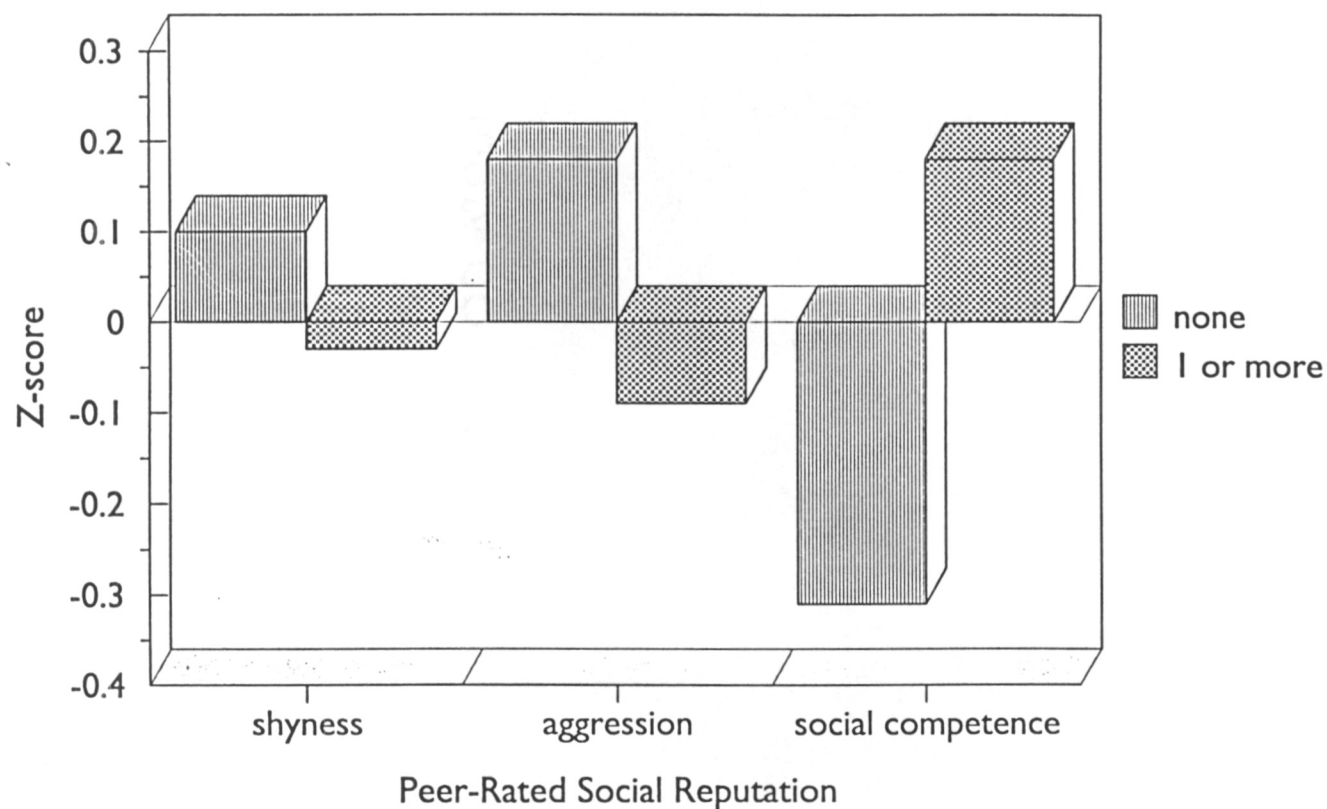
Teacher-Rated Problems: Peer Acceptance by Friendship Status



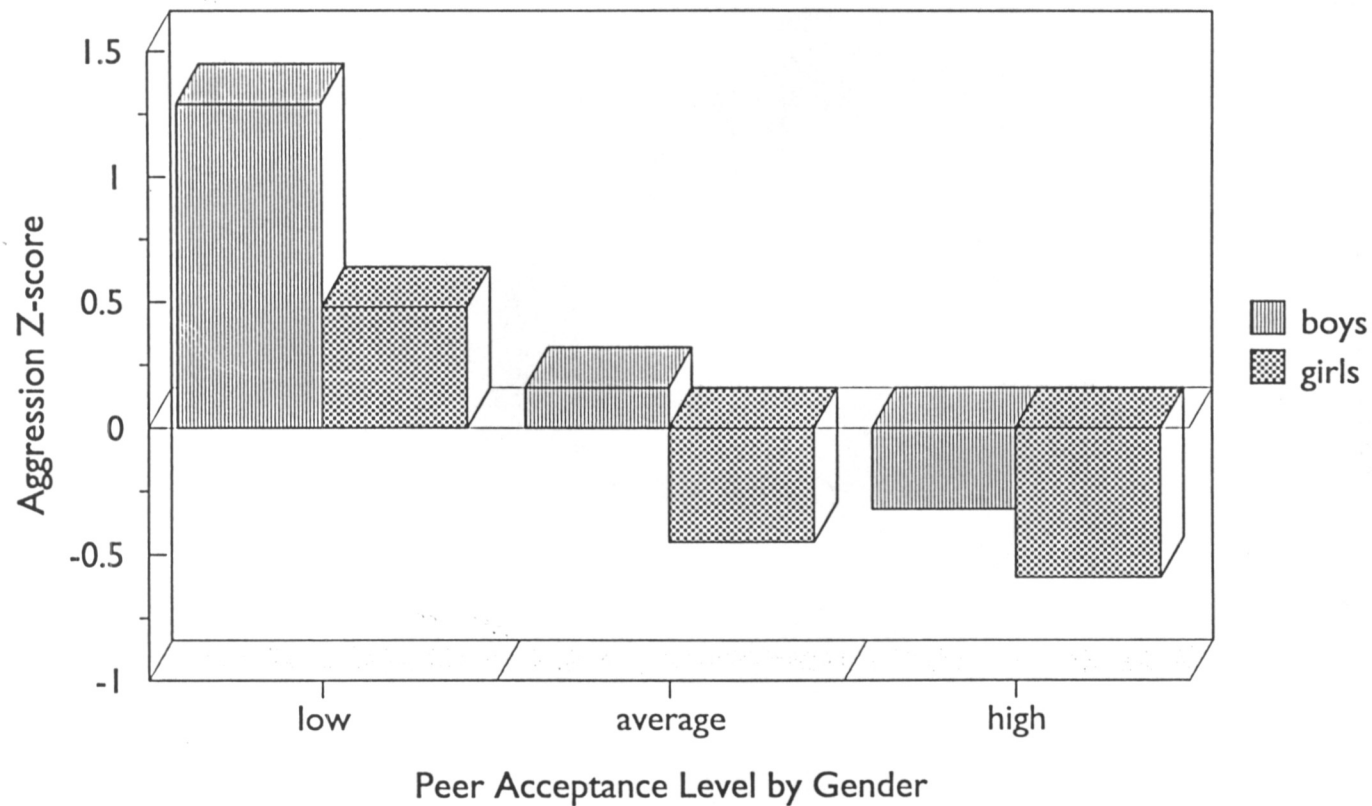
Relative Age and Peer-Rated Social Reputation



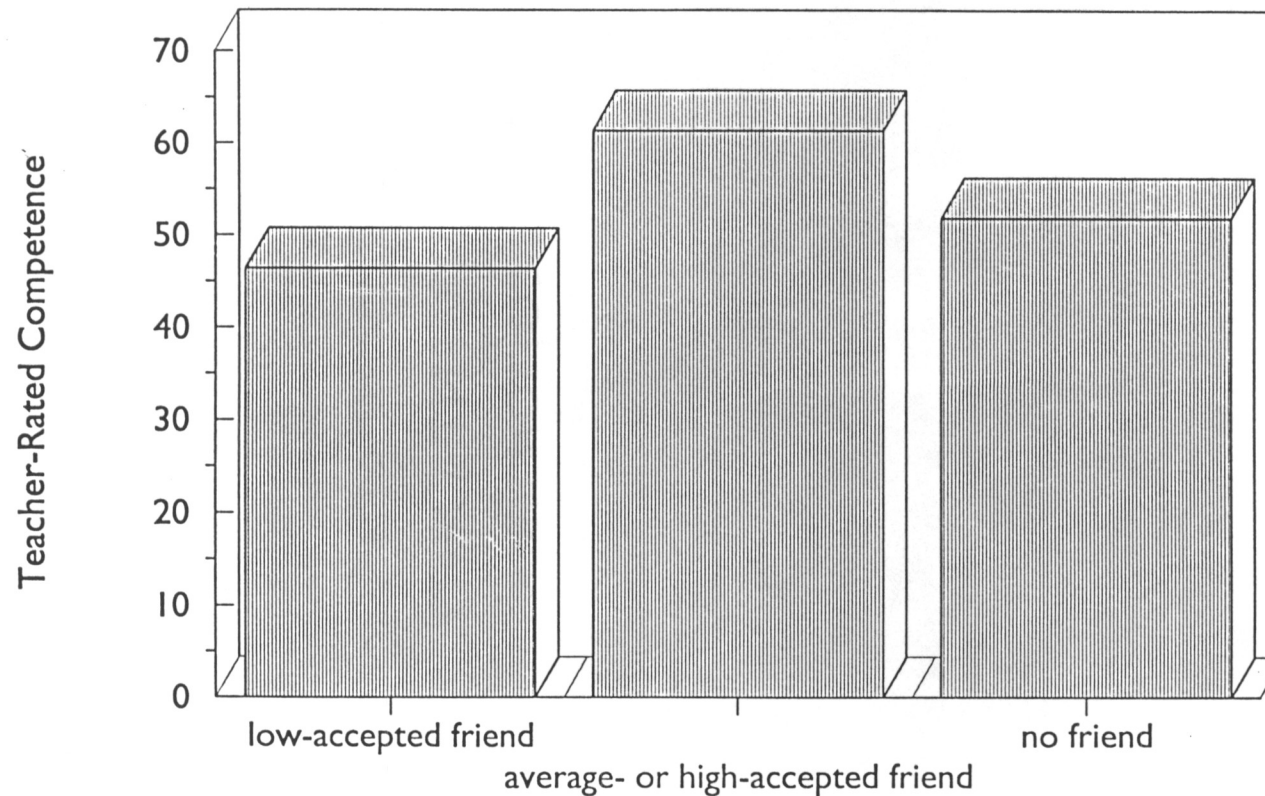
Friendship Status and Peer-Rated Social Reputation



Peer-Rated Aggression by Gender and Peer Acceptance



Low-Accepted Children's Competence by Friend Type



Low-Accepted Children's Problems by Friend Type

